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SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

APPLICATION OF SOUTHWESTERN ELECTRIC POWER COMPANY FOR AUTHORITY TO CHANGE RATES	§ § § §	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

NOVEMBER 16, 2020

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SOAH DOCKET NO. 473-21-0538
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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-1:

Please explain how common transmission and distribution costs in a substation are functionalized between the transmission and distribution functions. Provide a list of common transmission and distribution equipment in a substation and explain how specific equipment is functionalized. Identify each piece of equipment by FERC account.

Response No. Staff 2-1:

The Company uses the definitions provided in the FERC Uniform System of Accounting. Distribution and Transmission Plant are defined as follows:

14. Transmission and Distribution Plant.
For the purpose of this system of accounts:

A. Transmission system means:

(1) All land, conversion structures, and equipment employed at a primary source of supply (i.e., generating station, or point of receipt in the case of purchased power) to change the voltage or frequency of electricity for the purpose of its more efficient or convenient transmission;

(2) All land, structures, lines, switching and conversion stations, high tension apparatus, and their control and protective equipment between a generating or receiving point and the entrance to a distribution center or wholesale point; and

(3) All lines and equipment whose primary purpose is to augment, integrate or tie together the sources of power supply

B. Distribution system means all land, structures, conversion equipment, lines, line transformers, and other facilities employed between the primary source of supply (i.e., generating station, or point of receipt in the case of purchased power) and of delivery to customers, which are not includible in transmission system, as defined in paragraph A, whether or not such land, structures, and facilities are operated as part of a transmission system or as part of a distribution system.
Note: Stations which change electricity from transmission to distribution voltage shall be classified as distribution stations.

C. Where poles or towers support both transmission and distribution conductors, the poles, towers, anchors, guys, and rights of way shall be classified as transmission system. The conductors, crossarms, braces, grounds, tie wire, insulators, etc., shall be classified as transmission or distribution facilities, according to the purpose for which used.

D. Where underground conduit contains both transmission and distribution conductors, the underground conduit and right of way shall be classified as distribution system. The conductors shall be classified as transmission or distribution facilities according to the purpose for which used.

E. Land (other than rights of way) and structures used jointly for transmission and distribution purposes shall be classified as transmission or distribution according to the major use thereof.

The FERC Accounts for Transmission and Distribution for Plant In-Service including the items in each account are provided as follows:

353 Station equipment. (Transmission)

This account shall include the cost installed of transforming, conversion, and switching equipment used for the purpose of changing the characteristics of electricity in connection with its transmission or for controlling transmission circuits.

Items

1. Bus compartments, concrete, brick, and sectional steel, including items permanently attached thereto.
2. Conduit, including concrete and iron duct runs not a part of a building.
3. Control equipment, including batteries battery charging equipment, transformers, remote relay boards, and connections.
4. Conversion equipment, including transformers, indoor and outdoor, frequency changers, motor generator sets, rectifiers, synchronous converters, motors, cooling equipment, and associated connections.
5. Fences.
6. Fixed and synchronous condensers, including transformers, switching equipment blowers, motors and connections.
7. Foundations and settings, specially constructed for and not expected to outlast the apparatus for which provided.
8. General station equipment, including air compressors, motors, hoists, cranes, test equipment, ventilating equipment, etc.
9. Platforms, railings, steps, gratings, etc. appurtenant to apparatus listed herein.
10. Primary and secondary voltage connections, including bus runs and supports, insulators, potheads, lightning arresters, cable and wire runs from and to outdoor connections or to manholes and the associated regulators, reactors, resistors, surge arresters, and accessory equipment.
11. Switchboards, including meters, relays, control wiring, etc.
12. Switching equipment, indoor and outdoor, including oil circuit breakers and operating mechanisms, truck switches, and disconnect switches.
13. Tools and appliances.

362 Station equipment. (Distribution)

This account shall include the cost installed of station equipment, including transformer banks, etc., which are used for the purpose of changing the characteristics of electricity in connection with its distribution.

Items

1. Bus compartments, concrete, brick and sectional steel, including items permanently attached thereto.
2. Conduit, including concrete and iron duct runs not part of building.
3. Control equipment, including batteries, battery charging equipment, transformers, remote relay boards, and connections.
4. Conversion equipment, indoor and outdoor, frequency changers, motor generator sets, rectifiers, synchronous converters, motors, cooling equipment, and associated connections.
5. Fences.
6. Fixed and synchronous condensers, including transformers, switching equipment, blowers, motors, and connections.
7. Foundations and settings, specially constructed for and not expected to outlast the apparatus for which provided.
8. General station equipment, including air compressors, motors, hoists, cranes, test equipment, ventilating equipment, etc.
9. Platforms, railings, steps, gratings, etc., appurtenant to apparatus listed herein.
10. Primary and secondary voltage connections, including bus runs and supports, insulators, potheads, lightning arresters, cable and wire runs from and to outdoor connections or to manholes and the associated regulators, reactors, resistors, surge arresters, and accessory equipment.
11. Switchboards, including meters, relays, control wiring, etc.
12. Switching equipment, indoor and outdoor, including oil circuit breakers and operating mechanisms, truck switches, disconnect switches.

Note: The cost of rectifiers, series transformers, and other special station equipment devoted exclusively to street lighting service shall not be included in this account, but in account 373, Street Lighting and Signal Systems.

Prepared By: William M. Romine	Title: Regulatory Consultant Staff
Prepared By: Paul D. Flory	Title: Regulatory Consultant Sr
Sponsored By: Drew W. Seidel	Title: VP Dist Region Opers
Sponsored By: Wayman L. Smith	Title: Dir Trans Planning

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-2:

Does SWEPCO provide transmission service at distribution voltage to any wholesale customers?

Response No. Staff 2-2:

Yes. For wholesale customer delivery points connected to SWEPCOs' distribution system, SWEPCO provides wholesale distribution service (local delivery service) to supplement the transmission service provided by SPP over SWEPCO transmission facilities.

Prepared By: William M. Romine — Title: Regulatory Consultant Staff
Sponsored By: Wayman L. Smith — Title: Dir Trans Planning

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-3:

Has SWEPCO received any requests to provide transmission service at distribution voltage to any wholesale customers? Does SWEPCO anticipate providing this service in the future?

Response No. Staff 2-3:

Yes, SWEPCO has received requests to provide transmission service at distribution voltage to wholesale customers and anticipates providing this service in the future.

Prepared By: William M. Romine — Title: Regulatory Consultant Staff
Sponsored By: Wayman L. Smith — Title: Dir Trans Planning

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-4:

Please identify and provide detailed descriptions of all transmission capital additions to plant, including substations and high-voltage switching stations, that SWEPCO seeks to include in rates with a cost exceeding $250,000 which were not subject to an exemption in 16 TAC 25.101(c)(5)(C)-(F) and have been subject to a prudence determination by the Commission.

Response No. Staff 2-4:

SWEPCO interprets this question to ask for projects that have not been subject to a prudence determination. See Staff 2-4 Attachment 1 and Staff 2-4 Attachment 2 for projects not reviewed in a base rate case, although some of these projects were reviewed in TCRF Docket No. 49042. Please also see SWEPCO's responses to Staff 2-11 and 2-13.

Prepared By: William M. Romine — Title: Regulatory Consultant Staff
Sponsored By: Wayman L. Smith — Title: Dir Trans Planning

SWEPCO Line Rebuild Program - This program consists of multiple projects completed over a period of several years as part of an ongoing initiative to improve the SWEPCO Transmission System reliability and dependability. It consists of replacing deteriorated and poorly performing transmission lines and switch facilities with identified conditions that include, but are not limited to: broken, split and rotting poles, cross-arms and braces, bending of poles and cross-arms, missing hardware, broken conductor strands, woodpecker damage, etc. The lines rebuilt under this program include all or portions of the following:

- Hughes Springs to Jenkins Tap 69 kV (4.8 miles)
- Greenland to Van Buren Interconnect (VBI) North 69 kV (36.8 miles)
- North Huntington to Waldron West 69 kV (18.7 miles)
- Mt. Pleasant to New Boston 69 kV (42.1 miles)
- Clarendon to Northwest Memphis 69 kV (25.2 miles)
- Northwest Memphis to West Childress 69 kV (33.3 miles)
- Arsenal Hill to Longwood 138 kV (16.3 miles)
- Bann to Sugar Hill 69 kV (1.1 miles)
- Jenkins Tap to Lone Star Power Plant 69 kV (9.0 miles)

Inspections indicate the transmission lines and associated components continue to degrade. As transmission lines are inspected, the number of structures that do not meet the AEP guidelines due to rot, deterioration, and woodpecker damage, continue to increase. The AEP guidelines are built upon the National Electrical Safety Code, which specifies the necessary structural integrity and physical condition of a line to be maintained. On several lines, these numbers have increased to the point where a complete rebuild of the transmission line is warranted. A significant portion of these lines are over 50 years old, with some facilities approaching 90 years old. As physical

deterioration continues on the lines, the performance of the circuits will continue to degrade, and the number of momentary and permanent outages will increase. The increased outage frequencies and duration of the deteriorated lines jeopardize service reliability to customers and the reliability of surrounding areas. An increasing number of outages will have a negative reliability impact on customers served from the affected circuit, and may have a negative power quality impact on customers served from nearby circuits as well. Routine inspection and an increasing number of emergency callouts indicate that the lines and switches are frequently failing to meet AEP specifications. When these conditions are observed, corrective action must be taken to remedy the failed components by emergency replacement or repair. These unplanned activities typically result in higher than normal expenditures.

SWEPCo Station Proactive Rehab Program - This program includes projects to proactively renew transmission assets based on performance, equipment condition, and risk of failure. In light of Asset Health Center reports and field inspections, AEP Transmission determined it necessary to proactively replace equipment at multiple SWEPCO stations to prevent substantial failures that would result in lengthy outages. Among the improvements, the program replaced thirty-two aging transmission circuit breakers and seven transmission transformers at the following stations: Bann, Diana, Dyess, Northwest Texarkana, Patterson, Whitney, and Wilkes. The program also included smaller station work such as relaying upgrades and capacitor bank replacements at the following stations: Flint Creek, Hyland, Shamrock, Siloam Springs, South Fayetteville, Southwest Shreveport, and Texarkana.

Transmission Asset Replace/Refurbish Program - These projects were part of an ongoing program to improve system reliability and dependability by replacing failed equipment and aging station equipment that had reached the end of its serviceable life or could no longer be properly

maintained due to non-availability of spare parts. This program also included projects to proactively replace deteriorating transmission structures, foundations, poles, cross-arms, conductors, insulators and associated hardware that were identified through inspections. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

2013/2014 Asset Replacement Program - The projects under this program were part of an ongoing, multiyear effort to improve system reliability and dependability by replacing failed equipment and strategically replacing selected, obsolete station equipment that had reached the end of its serviceable life and could no longer be properly maintained due to non-availability of parts. In addition, the program was used to selectively replace obsolete and deteriorated transmission structures, foundations, poles, cross-arms, conductors, insulators, and associated hardware. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

SWEPCo Region Failure Program - This two year program addressed failures in the Southwestern Electric Power Company (SWEPCo) region. This program only addressed station and line equipment that were indicated as failures. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Shamrock - Nichols (SPS) 115KV Line - Various conditions identified in field inspections on the Shamrock - Nichols 115 kV Line warranted replacement of equipment on the line. These conditions were related to rot and woodpecker damage in structures as well as burnt insulators. This project replaced more than 80 wood pole structures along with various cross-arms and insulators.

East Rogers - Beaver Dam 161 kV Line - The East Rogers - Beaver Dam 161 kV Line rehab project addressed various conditions identified in field inspections on the subject line asset. Several conditions associated with the existing wood pole structures were identified in late 2016. These conditions were related to rot and woodpecker damage in structures as well as burnt insulators. In total, this project remediated twenty-one identified conditions by replacing fifteen unique wood pole structures.

SWEPCo Purchase/Rebuild Major Equipment - This program was for the purchase of major spare equipment for the transmission and distribution systems. The equipment purchased consisted mainly of capital spare transformers, spare reactors, spare circuit breakers, mobile transformer stations, and spare transmission line towers. A three-year program allows AEP to secure equipment contracts to leverage our purchases and obtain the best prices for the needed equipment. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Flint Creek - Brookline 345 kV Line - This project was to remediate identified conditions on the Flint Creek-Brookline 345 kV line to improve reliability. The Flint Creek-Brookline 345 kV line proactive rehab project involved remediating failing polymer insulators, dampers, and armor rods on 88 structures. The polymer insulators are showing signs of flashovers during storm events involving rain. When events occur, it is difficult to determine where a fault has occurred. Due to the unreliability of the insulators, a proactive rehab project replaced all insulators. In total, this project replaced 327 insulators, dampers, and armor rods.

SWEPCo SEL/GE Relay Upgrade - The electromechanical relays at various substations in the Southwest Electric Power Company (SWEPCo) region were in need of replacement due to asset

performance, condition, and risk. The identified relays were obsolete, no longer supported, out of warranty, or had numerous service notices that describe vulnerabilities and high risk of failure. The modules within these relay panels needed replacement in order to sustain grid resilience, performance, and stability. General Electric (GE) and Schweitzer Engineering Laboratories (SEL) agreed to supply replacement modules, at a discounted price, in strategically identified GE and SEL protective relay panels. Front panel replacements also occurred with the GE module upgrades.

Tenaha Station Work - This project replaced the drainage system and the entire station fence at Tenaha Station. Tenaha Station had severe erosion problems that were caused by a failed drainage system inside the station. One corner of the station had begun to collapse and was approaching a shield wire pole that could fall onto station equipment if left to continue. As a result, AEP replaced the drainage system and the entire station fence at Tenaha Station.

Booneville - West Booneville 69 kV Line Rehab – This project remediated identified conditions on the Booneville-West Booneville 69 kV line to improve reliability. The Booneville-West Booneville 69 kV line proactive rehab project involved replacing 49 wood poles and installing 32 steel cross arms and 130 polymer insulators found through inspection to have significant wood pecker, rot, and weather damage.

SWEPCo Station Rehab Program - This Program focused solely on replacing failed components and equipment in danger of imminent failure. This equipment included circuit breakers, transformers, relays and other station components.

Whitney – Kilgore Line Rehab - This project remediated identified conditions on the Whitney-Kilgore 69 kV line to improve reliability. The Whitney-Kilgore 69 kV line rehab project involved

replacing 50 wood poles, installing 110 steel cross arms, and replacing 32 X-braces found through inspection to have significant woodpecker, rot, and weather damage.

SWEPCo Transmission Access Control - An access control system was implemented across all of AEP's Transmission and Distribution stations to standardize security architecture and help facilitate internal AEP security management and communications. The new security access system, ABLOY PROTEC CLIQ, is a new lock technology system that integrates electronics and mechanics and allows for a standardized system with the ability to change access rights to stations within AEP's system. This program is designed to ensure compliance to North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) standards. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Robson Road – Kingston 69 kV Line Rehab - This project was to rehab the Robson Road-Kingston 69 kV line to increase reliability and maintain continuity of service. The line is approximately 14 miles long and is built with single pole, B-Type construction, and H-Frame wood structures. There were 56 conditions identified during recent comprehensive walking and aerial inspections. These conditions were considered a liability to the operation of the line. To resolve these issues, AEP replaced poles and cross arms and repaired minor conditions to increase reliability and maintain continuity of service.

Cass Tap to Roach – North Texas Electric Cooperative (NTEC) requested a new delivery point and upgrades to the existing Munz City Station. The new delivery point was connected from the West Atlanta to IPC Domino 138 kV line. AEP purchased land and constructed a new 138 kV box bay, Cass Tap Switching Station, consisting of two breakers, one tap switch, and 138 kV

metering units. Munz City Station was reconfigured with the installation of two circuit breakers, a new meter and 138 kV metering transformers.

Leaside Way – This project involved the construction of a new 138/69 kV station with a four breaker 138 kV ring bus, 138/69 kV auto transformer, and a single 69 kV line exit. The new Leaside Way Station eliminates two, three-terminal line arrangements that create relaying difficulties. The mitigation to the difficulties is to delay tripping to allow proper operation, causing longer fault clearing times. These long clearing times resulted in power quality issues for local industrial customers, causing their equipment to trip off. Completion of this project allowed the relay schemes to operate normally providing for faster clearing times and no disruption to the customers.

East Fayetteville - Arkansas Electric Cooperative Corporation (AECC) requested to expand the East Fayetteville delivery point to allow them to convert their 69 kV system in NW Arkansas to 161 kV. To accomplish this request, AEP constructed the East Fayetteville switching station on the Hyland to Osburn 161 kV line to connect to AECC's East Fayetteville Substation. AECC constructed a new AECC East Fayetteville 161 kV switching station and two 161 kV transmission lines from AECC East Fayetteville 161 kV switching station to AEP terminals in the new East Fayetteville switching station.

Hill Lake - Enterprise Products Operating LLC requested service for approximately 14 MW of new load. As a result Southwestern Electric Power Company (SWEPCO) acquired right of way (ROW) to construct a new 1/4 mile double circuit Hill Lake 138 kV Line Extension and 138 kV high side in/out switching Hill Lake Station with supervisory control and data acquisition (SCADA) switches.

Hallsville South Tap - North Texas Electric Cooperative (NTEC) requested a new delivery point. The new delivery point, Hallsville South Tap, is supplied from the Pirkey-Whitney 138 kV Line. AEP constructed a new 138 kV box bay station with a meter and 138 kV meter transformers. AEP also provided a terminal for NTEC's 138 kV line to NTEC's Gum Springs Station. An initial load of 10 MW was projected.

Wedington Tap - Arkansas Electric Cooperative Corporation (AECC) requested a new delivery point on the Chamber Springs - South Fayetteville line. AEP installed Wedington Tap Station, including a 161 kV box bay structure on the Chamber Springs - South Fayetteville 161 kV Line. AEP provided a terminal for AECC's 161 kV line to its station. Load at the new delivery point was 6 MW.

Morton Saline Sub - SWEPCO constructed a greenfield substation called Morton Station in Grand Saline, Texas. Morton Salt was served from Grand Saline Station (#988). Grand Saline Station is comprised of two non-Load Tap Changing (non-LTC) transformers operated in parallel with a total max capacity of 19.69 Mega Volt-Amp (MVA). These transformers were forecasted to have a load of 19.39 MVA in 2016, which was 98.5% of their rated capacity. This forecast loading was due primarily to the Morton Salt facility adding equipment to increase their salt production capability at their facility in Grand Saline, Texas. The facility manager at Morton Salt sent a letter to SWEPCO requesting that a new substation be constructed in order to serve their future load. Morton Salt signed a new ten-year contract for their anticipated load. Morton Salt transferred the necessary land and easements to SWEPCO for the construction of this new Morton Station (#1169). Morton Station consists of two 25 MVA transformers. One transformer is dedicated service to Morton Salt and the other transformer serves a SWEPCO distribution feeder that will tie back into Grand Saline Circuit 967110 at Texas Highway 110. The combination of

this dedicated service to Morton Salt and the distribution feeder tie to Circuit 967110 effectively reduced the loading on the Grand Saline Station to approximately 10 MVA, which would be 50.8% of the rated capacity of the station.

Barite Road TAP POD - Arkansas Electric Cooperative Corporation (AECC) requested a new Point of Delivery (POD) to serve a 10 MW load. To accommodate their request, AEP constructed a new 138 kV box bay station, Barite Road TAP, and three 138 kV switches. The station is served by tapping the South Dierks to Patterson 138 kV line.

Lake Hawkins Project - East Texas Electric Cooperative (ETEC) and Rayburn Country Electric Cooperative (Rayburn) constructed a new 138 kV line between the Ben Wheeler and Barton Chapel 138 kV stations. As a result, a 3-terminal line would have been created on the SWEPCO 138 kV system. To eliminate this 3-terminal line, ETEC installed two new 138 kV breakers at Lake Hawkins. In conjunction with ETEC's installation of the two new 138 kV breakers, SWEPCO needed re-route the existing Brady Switch to North Mineola 138 kV line into the new breakers, install an RTU and SCADA control of the new breakers, and install new billing meters at Lake Hawkins and Ben Wheeler.

LeTourneau - Nucor - Nucor requested a new point of delivery due to the recent sale of a portion of Joy Global's Steel production facilities to Nucor and had plans for a production facility where the current 69 kV feed is located. To accommodate the customer, AEP installed a new two-way phase over phase (POP) structure and POP meter structure inside the existing Letourneau Station to better serve Nucor's needs for future expansion.

Arsenal Hill - Shed Road Relocation - This project relocated portions of two 69 kV lines that were impacted by a road widening project in Bossier City, LA. The lines were located in road

right-of-way (ROW). To accommodate the widening of Old Benton Road, AEP was required to remove and replace pole structures on the Arsenal Hill - Shed Road 69 kV line. One steel H-Frame structure was installed inside the Shed Road Station. To accommodate the widening of Hamilton Road, AEP removed and replaced pole structures on the Minden Road - Shed Road 69 kV line.

Interstate 49 Expansion Transmission Line Relocation – This project consisted of replacing and relocating multiple AEP transmission facilities along the Interstate 49 highway project in NW Louisiana. It involved Arsenal Hill-Lieberman, North Market - Blanchard and Arsenal Hill - Longwood line assets.

Godfrey Road POD - Black Bayou Operating, LLC, requested to interconnect a 3.5 MW load in Caddo Parish, LA, to serve their oil recovery operations and injection wells. To accommodate this request, AEP constructed Godfrey Road, a new box bay station, The station is served by tapping the existing 69 kV line from Bloomburg to Hosston. Low side metering was installed in the customer's station

SWEPCo Forestry ROW Widening - This program was for danger tree removal and widening the rights-of-way for SWEPCo Transmission Lines. The NERC standard FAC 003 applies to vegetation management on transmission lines operating at 200 kV and above, plus other, lower voltage lines deemed critical by the Regional Entity to reliable operation of the transmission system. To comply with this standard, AEP Transmission implemented a multi-year plan to widen these reportable facilities to the full easement width.

SWEPCo Production Plant Blanket – This blanket was for the purchase of spare breakers and transformers including spare parts. Charges made to this blanket were only for projects that are directly devoted to, or an integral part of, the process of generating energy.

Brush Creek - Southwestern Electric Power Company (SWEPCo) constructed a new distribution greenfield substation called Brush Creek Station in Elm Springs, Arkansas. The Elm Springs, Cave Springs, and Lowell areas were served from the Lowell Substation (#924) on a long radial feeder at 12.47 kV. The 2017 projected summer load forecast at the Lowell Substation was 27.87 MVA or 106% of the 26.25 MVA maximum capability rating of the transformer. The feeder circuit serving the cities had a 2017 forecast of 14.08 MVA or 108.6% of its 12.96 MVA summer maximum capability rating. The Brush Creek Substation consists of a single 25 MVA transformer and two distribution feeders. The transmission portion of the project consisted of building a 161 kV in and out transmission feed off of the existing Tontitown – Lowell 161 kV line and installing three (3) switches inside the new substation.

Rodessa Substation - The existing SWEPCo Rodessa Substation station was upgraded from a single bank 6.25 MVA transformer to an "Urban design" with one (1) 25 MVA 69/13.09kV non-LTC transformer. The ability to expand the station for a future second transformer was provided in this design. The existing three phase 500/625 kVA bus regulator was replaced with three (3) single phase 7.62kV 833/1241 kVA ONAF regulators. Two (2) 12kV 1200 Amp feeder breakers, with the possibility of two future circuits, were installed as replacement for the existing single 12kV 600 Amp feeder breaker. The existing feeder circuit was reconductored with 1033 AL for approximately two (2) miles in the direction west of the station. The high side of the station was built as a 69kV IN and OUT H frame with loop split "slanted V" vertical break, motor operated switches on each line. A 16' x 18' Drop In Control Building will be installed to provide for SCADA communication and relay protection.

Transmission Capital Blanket - This program covered projects such as transmission line work, station asset replacements due to failures, public relocation changes made mandatory by the

alteration, construction, reconstruction, or relocation of all public projects carried out by a governmental body, and storm recovery costs for minor storm events. These were all projects that individually cost less than $500,000. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Welsh HVDC Tie - When the Welsh HVDC was originally constructed, both the ERCOT and SPP transmission systems in the Welsh area were tightly regulated by large base load generating plants. However, due to changes in the generation supply curve and the corresponding economic dispatch of the system, this is no longer the case. This lack of tight voltage regulation led to high voltage conditions around the Welsh HVDC and the reduction in local on-line generation also contributed to issues with 5th harmonics, leading to trips of the HVDC. In order to alleviate these conditions, SWEPCo installed reactive compensation and a 5th harmonic filter at the Welsh Station. The Welsh HVDC control system computers and software were also outdated, resulting in maintenance and functionality challenges that reduced the reliability of the HVDC under the existing and future conditions. Those systems were also replaced.

Telecom Fiber Buildout Program - This project is part of an on-going program to provide AEP Transmission with a strong fiber based telecommunications network with the following key benefits:

- Fiber based protective relaying schemes with diverse communication paths to stations 138kV and higher;
- Fiber based Remote Terminal Unit communication paths (AEP owned and controlled; no leased circuits and associated reliability issues and monthly O&M costs);
- Bandwidth required to backhaul Phasor Measurement Unit data;

- Bandwidth required to backhaul Asset Health data (breakers, transformers, switches, etc.)
- Bandwidth required to backhaul video from multiple security cameras at a station
- North American Electric Reliability Corporation-Critical Infrastructure Protection (NERC CIP) security information (card readers, keypads, sensors, etc.) over AEP controlled telecommunications systems;
- Move AEP microwave radio based backbone telecommunication systems from primary to secondary transport systems;
- Telecommunications transport equipment vendors have been evolving away from microwave to fiber based platforms putting AEP in a position to take advantage of this evolution;
- Microwave based transport systems offer a very small fraction of the bandwidth provided by a fiber optic based system;
- Microwave based transport systems are subject to reoccurring outages due to interference and weather conditions that do not affect fiber based systems;
- Fiber based systems offer additional capacity to meet AEP's future strategic telecommunications requirements; and
- Efficient and reliable operation of the Transmission (and Distribution) systems of the future will require the bandwidth and resiliency that only a fiber optic based telecommunications system can provide.

See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

SWEPCO Region Major Equipment/Spares Program - The Transmission sparing strategy is based on a probabilistic model that predicts failures based on AEP specific transformer data, historical failure rates and material lead times across every operating company. This strategy

creates a required target for spares for each operating company based on current inventory, kV class, and failure rates, among other things. This three-year program (2017-2019) consists of specific asset replacement projects, replacement of failed equipment, and the purchase of major spare and mobile equipment. The program is part of an ongoing effort to improve system reliability and dependability by replacing equipment that has reached the end of its serviceable life, and by purchasing long-lead-time equipment that will become system spares. The equipment purchased will mainly consist of capital spare transformers, spare reactors, spare circuit breakers, mobile transformer stations, and spare transmission line towers. A three-year program allows SWEPCo to secure equipment contracts to leverage our purchases and obtain the best prices for the needed equipment. Having these spares on hand will improve reliability to customers by enabling a quicker restoration in the event of a service interruption, either through the use of a mobile transformer or more timely replacement of failed equipment. For long-lead-time equipment, this can be particularly important as a failure can leave the transmission system in a vulnerable state until new equipment is installed. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Welsh GSU Replacement – This project was for Transmission station work required at Welsh for moving the GSU from the retired unit 2 to unit 1. The Welsh GSU associated with unit number 1 was failing and the GSU associated with unit 2 was a newer version so the failing unit 2 GSU was replaced with the GSU from unit 1.

Telecom Upgrades - This project was a multi-year effort to replace obsolete equipment that is no longer supported by telecommunication companies by replacing analog leased lines, frame relay circuits (obsolete digital leased line), and tone telemetry installations (obsolete 2-point system alarms). Telecom providers phased out these older technologies, which they will no longer

support, and which AEP Transmission will no longer be able to support due to lack of expertise and unavailability of parts. These upgrades also required the replacement of related station equipment such as older model RTUs that will not support newer technology, and in the case of obsolete tone telemetry, RTUs had to be added to support the newer Telecom technology. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

Chamber Springs 345 kV Reactor -. The Chambers Spring reactor was needed to maintain voltage within the allowable range through all seasons in the Northwest Arkansas area but is most heavily needed in spring and fall. In periods of off peak loading Flint Creek generator was unable to maintain its voltage schedule. During these periods the generation unit was consuming max VARs and is still unable to maintain proper voltage. To remedy this, the Flint Creek – Brookline 345kV line had to be taken out of service under these conditions. Installation of the reactor allows SWEPCo to maintain a full intact system including this 345kV tie line and still maintain proper voltage. In order to alleviate the voltage issue, a 345 kV reactor bank and circuit breaker were added at Chamber Spring Substation. The station was expanded on AEP property in order to accommodate the reactor bank.

SWEPCO Modernization Program - The projects under this program are part of an ongoing, multiyear effort to improve system reliability and dependability by strategically replacing technologically obsolete equipment that have reached the end of its serviceable life or that can no longer be properly maintained due to part availability.

North Huntington Relay Upgrade - Relay settings at the North Huntington Station were not able to protect the Fort Smith 161 kV line (tie line with OG&E). In addition, these relays needed

upgrades in order to meet future NERC loadability requirements. To remediate the protection of the Fort Smith 161 kV line and meet future NERC loadability requirements, this project included upgrading the line and breaker relays at the North Huntington Station within existing control house.

Vernon Main: Add capacitor bank - A number of 138 kV buses along the line from Oklaunion - Lake Pauline - Munday East experienced low voltages under the contingency loss of the Oklaunion 345/138 kV transformer followed by the subsequent loss of the other Oklaunion 345/138 kV transformer. To address these low voltages, two 138 kV 14.4 mega volt amps (MVAR) capacitor banks were installed at the Vernon Main Street 138 kV bus. Additional property was needed for the installation and transmission lines owned by SWEPCo had to be relocated for the capacitor bank installation.

Valliant to Northwest Texarkana 345 kV Line - This project was mandated by the SPP RTO as a part of their "High Priority Projects" Study and subsequent recommendations. This project provides reliability and economic benefits to the region by increasing west – east transfer capability and enabling more efficient operation of the region's generation supply.

The Longview Heights to Marshall 69 kV Line - The SPP identified the Longview Heights - Marshall 69 kV line overloaded under contingency conditions. The project received an NTC (Notification to Construct) and was mandatory for regional reliability network upgrades. To remediate the overload condition, this project rebuilt 17.8 miles of the 69 kV line from Longview Heights – Marshall.

The Brownlee Road to North Market 69 kV Line - The SPP identified and mandated a reliability project to rebuild approximately 4.7 miles of 69 kV transmission line from Brownlee Road to

North Market. The existing line overloaded during contingency outage conditions. In addition to the line rebuild, upgrades were completed at the Brownlee Road and North Market Stations.

Evenside to Northwest Henderson 69 kV Line - This is a SPP mandated reliability project needed to address a single contingency overload for the outage of the Northwest (NW) Henderson to Poynter 69 kV line. The project involved the rebuild of the Evenside to Northwest Henderson 69 kV line.

Chamber Springs to Farmington 161 kV Line - This is an SPP mandated reliability project needed to address a single contingency thermal overload. The project involves a rebuild of the 11.1 miles of 161 kV line from Chamber Springs to Farmington. In addition to the line rebuild, terminal equipment was upgraded at the Chamber Springs and South Fayetteville stations.

Broadmoor - Fort Humbug 69 kV - The Southwest Power Pool identified and mandated a reliability project to rebuild approximately 1.7 miles of 69 kV transmission line from Broadmoor to Fort Humbug. The existing line overloaded during contingency outage conditions. In addition to the line rebuild, upgrades were completed at the Broadmoor and Fort Humbug stations.

Ellerbe Road – Lucas 69 kV - This project was mandated by SPP to address the overload of the Ellerbe Road - Lucas 69 kV line for the outage of the South Shreveport - Wallace Lake 138 kV line. To alleviate the overload, AEP rebuilt approximately 3 miles of 69 kV line from Ellerbe Road Station to Lucas Station. Ellerbe Road Station scope included the replacement of the existing 69 kV breaker, installation of a three-phase set of capacitor voltage transformers (CCVT's), and replacement of both arresters and line/breaker relays. Lucas Station scope included the addition of arresters to the 69 kV circuit to Ellerbe Road Station and conduit for fiber from the dead-end structure to the pre-cast cable trench.

Siloam- W Siloam 161kV Rebuild - Southwest Power Pool (SPP) identified in the 2017 SPP Integrated Transmission Planning (ITP) assessment that the Siloam Springs-Siloam Springs City 161 kV will experience overloads during the outage of the Flint Creek-Tonnece 345 kV line. To remediate the overload condition, this project rebuilt 2.1 miles of the 161 kV line from Siloam Springs-West Siloam Springs and remote end work at Siloam Springs Station was required.

Linwood - South Shreveport Line - This project was to rebuild the Linwood to South Shreveport 138 kV transmission line as part of a SPP mandatory project to address the overload that will occur on the line during the outage of the Arsenal Hill to Fort Humbug 69 kV transmission line. During this project, 2.42 miles of the 138 kV line from Linwood to South Shreveport was rebuilt with Aluminum Composite Steel Reinforced (ACSR) conductor wire. Circuit breakers, switches, jumpers and relays were upgraded to at least 2000A at Linwood Station and South Shreveport Station.

Brooks Street - Edwards Street 69 kV Line - This is a SPP mandatory project to address the overload of the Brooks Street - Edwards Street 69 kV line for the outage of the Arsenal Hill - Fort Humbug 138 kV line. The overload was addressed by rebuilding approximately one mile from Brooks Street - Edwards Street. Additionally, Brooks Street Station and Edwards Street Station were upgraded with jumpers, switches, relays, and a new drop in control module was installed at each station.

Daingerfield - Jenkins Tap 69 kV Line - This is a SPP mandatory project for regional reliability network upgrades. SWEPCo rebuilt 1.3 miles of the Daingerfield to Jenkins 69 kV transmission line. The rebuild was needed to address the overload of the Daingerfield to Jenkins transmission line caused by the outage of the Lone Star South to Pittsburgh 138 kV or Welsh Reserve to Wilkes

138 kV.

Messick 500/230kV Station - The Southwest Power Pool has identified and mandated a 2012 Integrated Transmission Planning Near-Term (ITPNT) project to build a new 500/230kV station at Messick. The new station addresses the overload of IP Mansfield to Wallace Lake 138 kV line, which overloads to 108% for the loss of the Dolet Hills to South Shreveport 345 kV line.

IPC 138 kV Capacitor Bank - This project is part of the Southwest Power Pool (SPP) 2017 Integrated Transmission Planning (ITP) Near Term list of projects. These are mandatory projects for Regional Reliability Network Upgrades. This project was needed to address low voltages in Cass County, Texas. In order to resolve the low voltage issues and increase regional reliability, American Electric Power (AEP) installed two 14.4 MVAR 138 kV capacitor banks at International Paper Company (IPC) 138 kV Station.

Logansport 138V: 28.8 MVAR Capacitor Bank - The Southwest Power Pool identified and mandated a 2010-2019 SPP Transmission Expansion Plan (STEP) project to install a 28.8 MVAR capacitor bank at the Logansport Station. The capacitor was installed to address low voltage in the Logansport area for the loss of the lines connecting to the Western Electric 138 kV bus.

Rock Hill – Springridge - This was a SPP mandatory project to address the overload of the Rock Hill - Springridge 138 kV line for the outage of the SW Shreveport – Western Electric - Stonewall 138 kV line. The overload was addressed by rebuilding approximately Twenty-seven miles from Rock Hill - Springridge. Additionally, a new 138 kV box bay station, with three 138 kV switches was installed at Springridge.

Letourneau 69kV Capacitor - The project was needed to address the overload of Letourneau to

Letourneau Tap 69 kV under normal conditions. To alleviate the overload condition, a 16.2 MVAR, 69 kV capacitor bank was added at Letourneau along with a 69 kV capacitor switcher, a remote terminal unit (RTU), and necessary communication for remotely controlling the capacitor banks.

SWEPCO 2016 May Storm - Texarkana - On May 9, 2016 a major storm event swept across the Texarkana/Shreveport, LA region with high winds and torrential rains damaging multiple structures on four transmission circuits. The damage in all four instances caused the circuits to lock out or be forced out of service for major repairs to be completed. The following circuits were impacted: Bann-North New Boston-Northwest Texarkana 138 kV Northwest Texarkana-Valliant 345-Welsh 345 kV 39th Street-Bann-Sugar Hill 69 kV Longwood-Wilkes 345 kV. See Staff 2-4 attachment 2 for descriptions of work orders in excess of $250k associated with this program/blanket.

SWEPCO TRANSMISSION
Capital Projects

Project Description	PROJECT_ID	PROJ_DESC	WO_ID	WO_DESC	UTILITY_ACCOUNT	IN-SERVICE_DATE	ACTIVITY_COST
SWEPCo Purchase/Rebuild Major Equipment	A12102518	A12102518 Pirkey Reserve Spare 90MVA 13	42228785	PIRKEY RES SP 90MVA 138/69/13 8KV W/30MVA TV	35300 - Station Equipment	09/01/2016	749,618
SWEPCo Purchase/Rebuild Major Equipment	A12102519	A12102519 T/SW/Shadow for A12102518	42228785SWP	PIRKEY RES SP 90MVA 138/69/13 8KV W/30MVA TV	35300 - Station Equipment	09/01/2016	378,734
2013/2014 Asset Replacement Program	A13006064	A13006064 SOUTHWEST SHTREVEPORT Replac	42318807	SOUTHWEST SHREVEPORT INSTALL TERTIARY REACTOR & PANELS	35300 - Station Equipment	03/01/2016	745,358
2013/2014 Asset Replacement Program	A13006064	A13006064 SOUTHWEST SHTREVEPORT Replac	T0146920	SOUTHWEST SHREVEPORT RPLC FAILED AUTOTRF P345 36 SN C0607351	35300 - Station Equipment	12/01/2014	278,535
2013/2014 Asset Replacement Program	A13006564	A13006564 SOUTHWEST SHTREVEPORT Replac	42318807SWP	SOUTHWEST SHREVEPORT INSTALL TERTIARY REACTOR & PANELS	35300 - Station Equipment	03/01/2016	380,091
2013/2014 Asset Replacement Program	A13006589	A13006589 lled T/SW/Shadow for A13006A89	42384102SWP	MIDWAY UPGRADE 69KV TERM REPL CB 8320 SW PT CCVT ARR CA RELA	35300 - Station Equipment	07/01/2016	421,494
2013/2014 Asset Replacement Program	A13006A89	A13006A89 T/SW/Midway(SW)-Repl69KVCBs	42384102	MIDWAY UPGRADE 69KV TERM REPL CB 8320 SW PT CCVT ARR CA RELA	35300 - Station Equipment	07/01/2016	830,885
2013/2014 Asset Replacement Program	A13006A91	A13006A91 T/SW/S Shreveport-Repl69kVCB	42384567	S SHREVEPORT RPL 69KV CB7210 PT CCVT ARR RELAY SW TO MWY/SMM	35300 - Station Equipment	09/01/2016	283,640
Telecom Upgrades	A13216A23	A13216A23 Danville (AP&L)(AR) Telecom Le	42608119	DANVILLE (AP&L)(AR) TELECOM LE	35300 - Station Equipment	02/01/2018	267,593
Telecom Upgrades	A13216A36	A13216A36 DeQueen -Telecom Legacy	42545999	DEQUEEN -TELECOM LEGACY	35300 - Station Equipment	02/01/2019	424,795
Telecom Upgrades	A13216A42	A13216A42 Branch Telecom Legacy Circuit	42626729	BRANCH TELECOM LEGACY CIRCUIT	35300 - Station Equipment	02/01/2018	264,823
Telecom Upgrades	A13216A46	A13216A46 Trichel-Arsenal Hill TelLegFib	42632499	TRICHEL-ARSENAL HILL - TELLEGFIBER	35616 - OVH Cond-Dev-Smart Grid	09/01/2018	801,582
Telecom Upgrades	A13216A50	A13216A50 SE Longview-Whitney TelLegFibe	42578391	SE LONGVIEW-WHITNEY TELLEG FIBER	35616 - OVH Cond-Dev-Smart Grid	11/01/2018	303,316
Telecom Upgrades	A13216A52	A13216A52 Linwood-SW Shreveport TeLegFib	42632506	LINWOOD-SW SHREVEPORT - TELLEGFIBER	35616 - OVH Cond-Dev-Smart Grid	09/01/2018	415,932
Telecom Upgrades	A13216A58	A13216A58 Domtar - Telecom Legacy Cir	42611245	DOMTAR (NEKOOSA) - TELECOM LEGACY	35300 - Station Equipment	11/01/2017	269,483
Telecom Upgrades	A13216A76	A13216A76 Shadow for A13216A46	42632499SWP	TRICHEL-ARSENAL HILL - TELLEGFIBER	35616 - OVH Cond-Dev-Smart Grid	09/01/2018	413,107
Telecom Upgrades	A13216A84	A13216A84 Van Buren Inter Telecom Legacy	42751538	VAN BUREN INTER TELECOM LEGACY	35300 - Station Equipment	06/01/2018	312,027
Telecom Upgrades	A13216A85	A13216A85 West Siloam Springs Telecom Le	42751516	WEST SILOAM SPRINGS TELECOM LE	35300 - Station Equipment	06/01/2018	299,098
Transmission Asset Replace/Refurbish Program	A13006B57	A13006B57 EAST ROGERS Replace the DLP	42565206	EAST ROGERS REPLACE THE DLP RELAYS 161 KV BEAVER DAM	35300 - Station Equipment	12/01/2016	401,572
Transmission Asset Replace/Refurbish Program	A15706506	A15706506 T/SEP/HOSSTN-BLOOMBURG69KV(AR)	42611588	2016 REHAB HOSSTON - BLOOMBURG (AR), REPL POLES & ARMS	35500 - Poles and Fixtures	12/01/2016	300,317
Transmission Asset Replace/Refurbish Program	A15706538	A15706538 Welsh Relay Repl on Wilkes 345	42677293	WELSH HVDC EAST TIE 345KV SUBSTATION	35300 - Station Equipment	04/01/2018	451,935
Transmission Asset Replace/Refurbish Program	A15706543	A15706543 SW Shreveport Rpl Fail Air Co	42570926	SW SHREVEPORT REPL FAILED SHUNT REACTORS ON MIDDLE AUTO	35300 - Station Equipment	06/01/2018	696,300
Transmission Asset Replace/Refurbish Program	A15706545	A15706545 T/SEP/DIANA-PLILERRD/STR REPLA	42573588	WHITNEY-PLILER-DIANA-LONE STAR SOUTH REPL 2 FAILED STRUCT	35500 - Poles and Fixtures	06/01/2017	601,273
Transmission Asset Replace/Refurbish Program	A15706549	A15706549 Shadow SWEPCO A15706545	42573588SWP	WHITNEY-PLILER-DIANA-LONE STAR SOUTH REPL 2 FAILED STRUCT	35500 - Poles and Fixtures	06/01/2017	308,468
Transmission Asset Replace/Refurbish Program	A15706550	A15706550 Shadow, A15706543, RPL Shunt R	42570926SWP	SW SHREVEPORT REPL FAILED SHUNT REACTORS ON MIDDLE AUTO	35300 - Station Equipment	05/01/2018	354,414
Transmission Asset Replace/Refurbish Program	A15706558	A15706558 South Shreveport Station Rehab	42645078	SOUTH SHREVEPORT STATION REHAB	35300 - Station Equipment	12/01/2017	682,567
Transmission Asset Replace/Refurbish Program	A15706623	A15706623 Vernon Main CB 122	42707036	VERNON MAIN STEET 138KV SUBSTATION	35300 - Station Equipment	05/01/2019	546,540
Transmission Asset Replace/Refurbish Program	A15706624	A15706624 Clarendon - Jericho 69kV strs	42657647	2017 WP/ CLARENDON - JERICHO 69KV REHAB (STEEL REPLACEMENT)	35500 - Poles and Fixtures	11/01/2018	727,403
Transmission Asset Replace/Refurbish Program	A15706625	A15706625 shadow for A15706624	42657647SWP	2017 WP/ CLARENDON - JERICHO 69KV REHAB (STEEL REPLACEMENT)	35500 - Poles and Fixtures	11/01/2018	372,316
Transmission Asset Replace/Refurbish Program	A15706730	A15706730 Shadow for A15706623	42707036SWP	VERNON MAIN STEET 138KV SUBSTATION	35300 - Station Equipment	05/01/2019	280,396
Transmission Asset Replace/Refurbish Program	A15706C02	A15706C02 SEP-East Leesville-Hicks-Rehab	42644366	2017 REHAB E LEESVILLE-HICKS 69 KV SEPTL347	35500 - Poles and Fixtures	07/01/2017	388,248
Transmission Asset Replace/Refurbish Program	A15706C08	A15706C08 Shadow for A15706558	42645078SWP	SOUTH SHREVEPORT STATION REHAB	35300 - Station Equipment	12/01/2017	350,323
Transmission Asset Replace/Refurbish Program	A15706C15	A15706C15 SEP-WILKES-NNEWBOSTON-RHB	42650846	2017 REHAB WILKES-NORTH NEW BOSTON SEPTL246	35500 - Poles and Fixtures	06/01/2017	353,921
Transmission Asset Replace/Refurbish Program	A15706C33	A15706C33 SEP-NLeesville-Hornbeck-REHAB	42694057	2017 REHAB 69KV N LEESVILLE-HORNBECK REPL 34 POLES 150 XARM	35500 - Poles and Fixtures	07/01/2017	576,759
Transmission Asset Replace/Refurbish Program	A15706C34	A15706C34 Shadow For A15706C33	42694057SWP	2017 REHAB 69KV N LEESVILLE-HORNBECK REPL 34 POLES 150 XARM	35500 - Poles and Fixtures	07/01/2017	296,197
Transmission Asset Replace/Refurbish Program	A15706C39	A15706C39 SEP-RedPoint-DeanPoint-RHB	42704592	2017 REHAB 138KV LIEBERMAN-RED POINT 132 3 REPL 100+ STR	35500 - Poles and Fixtures	10/01/2017	1,524,987
Transmission Asset Replace/Refurbish Program	A15706C40	A15706C40 Shadow For A15706C39	42704592SWP	2017 REHAB 138KV LIEBERMAN-RED POINT 132 3 REPL 100+ STR	35500 - Poles and Fixtures	10/01/2017	782,478
Transmission Asset Replace/Refurbish Program	A15706C41	A15706C41 SEP-Arsenal Hill-ShedRoad-RHB	42690455	2017 REHAB ARSENAL HILL - SHED RD 69KV REPL 14 STRUCTURES	35500 - Poles and Fixtures	06/01/2017	318,660
Transmission Asset Replace/Refurbish Program	A15706C43	A15706C43 SEP-Blanchard-NorthMarket-RHB	42716999	2017 REHAB - 69KV BLANCHARD - N MARKET REPL 125 WOOD W STEEL	35500 - Poles and Fixtures	09/01/2018	1,854,284
Transmission Asset Replace/Refurbish Program	A15706C44	A15706C44 Shadow For A15706C43	42716999SWP	2017 REHAB - 69KV BLANCHARD - N MARKET REPL 125 WOOD W STEEL	35500 - Poles and Fixtures	09/01/2018	956,667
Transmission Asset Replace/Refurbish Program	A15706C57	A15706C57 SEP-PrairieGrove-SiloamSpr-RHB	42684637	2017 REHAB SILOAM SPRINGS - PRAIRIE GROVE REPL 46 STRUCTURES	35500 - Poles and Fixtures	07/01/2017	540,743
Transmission Asset Replace/Refurbish Program	A15706C58	A15706C58 Shadow For A15706C57	42684637SWP	2017 REHAB SILOAM SPRINGS - PRAIRIE GROVE REPL 46 STRUCTURES	35500 - Poles and Fixtures	07/01/2017	277,821
Transmission Asset Replace/Refurbish Program	A15706C63	A15706C63 SEP-Dyess-Springdale1-RHB	42705364	2017 REHAB SPRINGDALE-DYESS #1 LINE 154	35500 - Poles and Fixtures	02/01/2018	1,334,299
Transmission Asset Replace/Refurbish Program	A15706C64	A15706C64 Shadow For A15706C63	42705364SWP	2017 REHAB SPRINGDALE-DYESS #1 LINE 154	35500 - Poles and Fixtures	02/01/2018	685,456
Transmission Asset Replace/Refurbish Program	A15706C71	A15706C71 SEP-GrandSaline-Quitman-RHB	42696060	2017 REHAB GRAND SALINE - QUITMAN REPL 120 STRUCTURES 214B	35500 - Poles and Fixtures	06/01/2018	391,150
Transmission Asset Replace/Refurbish Program	A15706C95	A15706C95 SEP-Sugarhill-Ashdown-RHB	42703649	2017 REHAB 12TH ST - SUGAR HILL-ASHDOWN C/O MULT STR	35500 - Poles and Fixtures	01/01/2018	611,594
Transmission Asset Replace/Refurbish Program	A15706C96	A15706C96 Shadow For A15706C95	42703649SWP	2017 REHAB 12TH ST - SUGAR HILL-ASHDOWN C/O MULT STR	35500 - Poles and Fixtures	01/01/2018	313,575
Transmission Asset Replace/Refurbish Program	A15706D02	A15706D02 SEP-Nashville-Okay-RHB	42706994	2017 REHAB NASHVILLE - OKAY LINE 153 C/O 60 STR	35500 - Poles and Fixtures	01/01/2018	513,532
Transmission Asset Replace/Refurbish Program	A15706D03	A15706D03 Shadow For A15706D02	42706994SWP	2017 REHAB NASHVILLE - OKAY LINE 153 C/O 60 STR	35500 - Poles and Fixtures	01/01/2018	263,492
Transmission Asset Replace/Refurbish Program	A15706D10	A15706D10 T/SWEPCO/W_ATL W AUTO FAIL	42680737	WEST ATLANTA - PURCHASE TRANSFORMER TO REPLACE FAILED UNIT	35300 - Station Equipment	12/01/2017	1,150,004
Transmission Asset Replace/Refurbish Program	A15706D12	A15706D12 T/SWEPCO/Chambers XFMR Failure	42694037	CHAMBER SPRINGS 345KV XFMR FAILURE REPLACEMENT	35300 - Station Equipment	10/01/2017	421,815
Transmission Asset Replace/Refurbish Program	A15706D13	A15706D13 Shadow for A15706D10	42680737SWP	WEST ATLANTA - PURCHASE TRANSFORMER TO REPLACE FAILED UNIT	35300 - Station Equipment	12/01/2017	588,134
Transmission Asset Replace/Refurbish Program	P14138004	P14138004 Brooks St Station Work	42572769	BROOKS STREET STATION WORK	35300 - Station Equipment	12/01/2017	587,583
Transmission Asset Replace/Refurbish Program	P14138005	P14138005 Edwards St Station Work	42572788	EDWARDS STREET STATION WORK	35300 - Station Equipment	12/01/2017	440,784
Transmission Asset Replace/Refurbish Program	P14138006	P14138006 SHADOW P14138004	42572769SWP	BROOKS STREET STATION WORK	35300 - Station Equipment	12/01/2017	299,022
Transmission Asset Replace/Refurbish Program	P14139003	P14139003 Linwood Station work	42589268	LINWOOD STATION WORK	35300 - Station Equipment	06/01/2018	417,114
Transmission Asset Replace/Refurbish Program	P14139004	P14139004 South Shreveport Station work	42589299	SOUTH SHREVEPORT STATION	35300 - Station Equipment	06/01/2018	654,503
Transmission Asset Replace/Refurbish Program	P14139504	P14139504 S Shreveport Station *SHADOW*	42589299SWP	SOUTH SHREVEPORT STATION	35300 - Station Equipment	05/01/2018	334,748

SWEPCO TRANSMISSION
Capital Projects

Project Description	PROJECT_ID	PROJ_DESC	WO_ID	WO_DESC	UTILITY_ACCOUNT	IN-SERVICE_DATE	ACTIVITY_COST
Telecom Fiber Build Out Program	A15713035	A15713035 Sugar Hill - Turk TelModFib	42678970	TTMP 2017 SUGAR HILL STATION - TURK STATION FIBER CABLE WO	35616 - OVH Cond-Dev-Smart Grid	03/01/2018	702,438
Telecom Fiber Build Out Program	A15713077	A15713077 Ashdown - Str 194 TelModFib	42679687	TTMP 2017 ASHDOWN STATION - SUGAR HILL STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	01/01/2018	425,090
Telecom Fiber Build Out Program	A15713080	A15713080 Flint Creek - Siloam Springs T	42702026	2018 TTMP FLINT CREEK STATION - SILOAM SPRINGS STA FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2018	385,220
Telecom Fiber Build Out Program	A15713093	A15713093 Springdale -East Rogers TelMod	42723613	2018 TTMP - DYESS STATION - EAST ROGERS STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2019	710,794
Telecom Fiber Build Out Program	A15713094	A15713094 Dyess-Gregg Str TelModFib	42717902	2018 TTMP - DYESS STATION - GREGG STREET STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2018	271,310
Telecom Fiber Build Out Program	A15713101	A15713101 Greggton - Perdue TelModFib	42724152	2018 TTMP - GREGGTON STATION - PERDUE STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	11/01/2018	302,176
Telecom Fiber Build Out Program	A15713102	A15713102 Knox Lee - NW Henderson TelMod	42724173	2018 TTMP - KNOX LEE STATION - NWT HENDERSON STA FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2019	610,617
Telecom Fiber Build Out Program	A15713106	A15713106 Springdale - Tontitown TelModF	42718252	2018 TTMP - SPRINGDALE STATION - TONTITOWN STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	10/01/2018	317,445
Telecom Fiber Build Out Program	A15713S02	A15713S02 Shadow for A15713035 No WOs	42678970SWP	TTMP 2017 SUGAR HILL STATION - TURK STATION FIBER CABLE WO	35616 - OVH Cond-Dev-Smart Grid	03/01/2018	360,487
Telecom Fiber Build Out Program	A15713S60	A15713S60 Shadow for A15713093 No WO's	42723613SWP	2018 TTMP - DYESS STATION - EAST ROGERS STATION FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2019	365,039
Telecom Fiber Build Out Program	A15713S69	A15713S69 Shadow for A15713102 No WO's	42724173SWP	2018 TTMP - KNOX LEE STATION - NWT HENDERSON STA FIBER WO	35616 - OVH Cond-Dev-Smart Grid	09/01/2019	313,713
SWEPCo Region Major Equipment/Spares Program	A16924008	A16924008 Purchase Spare 138kV Xfer	42926317	PIRKEY RESERVE YARD	35300 - Station Equipment	12/01/2019	595,543
SWEPCo Region Major Equipment/Spares Program	A16924009	A16924009 Purchase Spare 138kV Transform	42926318	LONGVIEW OPS RESERVE	35300 - Station Equipment	12/01/2019	583,579
SWEPCo Region Major Equipment/Spares Program	A16924012	A16924012 Shadow for A16924008 No WO's	42926317SWP	PIRKEY RESERVE YARD	35300 - Station Equipment	12/01/2019	305,876
SWEPCo Region Major Equipment/Spares Program	A16924013	A16924013 Shadow for A16924009	42926318SWP	LONGVIEW OPS RESERVE	35300 - Station Equipment	12/01/2019	299,770
SWEPCo Region Major Equipment/Spares Program	A17031001	A17031001 Tontitown Spare Prchse	42837810	TONTITOWN 345KV PRI/161KV SEC/13 8KV	35300 - Station Equipment	12/01/2019	3,246,563
SWEPCo Region Major Equipment/Spares Program	A17031002	A17031002 Shadow for A17031001	42837810SWP	TONTITOWN 345KV PRI/161KV SEC/13 8KV	35300 - Station Equipment	12/01/2019	1,667,284
SWEPCo Region Major Equipment/Spares Program	A17031005	A17031005 Pirkey Spare Purch 138kV	42838101	PIRKEY SPARE PURCHASE 138KV PRI/66-73 KV SEC Y-Y/< 13 2 KV	35300 - Station Equipment	09/01/2019	703,577
SWEPCo Region Major Equipment/Spares Program	A17031006	A17031006 Shadow for A17031005	42838101SWP	PIRKEY SPARE PURCHASE 138KV PRI/66-73 KV SEC Y-Y/< 13 2 KV	35300 - Station Equipment	09/01/2019	361,015
SWEPCo 2016 May Storm - Texarkana	SELAA1603	SELAA1603 SWEPCO - TX - Storm Shadow - T	42575538SWP	S-9-16 STRM N W TEXARKANA-LYDI	35400 - Towers and Fixtures	06/01/2017	288,558
SWEPCo 2016 May Storm - Texarkana	SETXS1603	SETXS1603 SWEPCO - TX - Storm - Transmis	42575538	S-9-16 STRM N W TEXARKANA-LYDI	35400 - Towers and Fixtures	06/01/2017	562,342
SWEPCo Transmission Access Control	A17938023	A17938023 SWEPCO-Tran-SecurityAccSys-Est	42752438	SWEPCO - TRANS STATION LOCKS	35200 - Structures and Improvements	02/01/2019	304,795
SWEPCo Region Failure Program	A15706626	A15706626 T/SWEPCO/IPC 138 GCB 7340 Fail	42684227	ICP 138KV ADD 145KV CIRCUIT BREAKER	35300 - Station Equipment	12/01/2018	1,246,531
SWEPCo Region Failure Program	A15706627	A15706627 Shadow for A15706626	42684227SWP	ICP 138KV ADD 145KV CIRCUIT BREAKER	35300 - Station Equipment	12/01/2018	634,567
SWEPCo Region Failure Program	A18806013	A18806013 Bann-New Boston Failed Insulat	42943303	BANN-NEW BOSTON REPLACE FAILED INSULATORS	35600 - Overhead Conductors, Device	06/01/2019	507,049
SWEPCo Region Failure Program	A18806014	A18806014 Shadow for A18806013	42943303SWP	BANN-NEW BOSTON REPLACE FAILED INSULATORS	35600 - Overhead Conductors, Device	06/01/2019	260,208
Transmission Capital Blanket	B194ARLRE	B194ARLRE T/SW/Non-Specific Work - Line	TL032997	DEQUEEN - MENA CP REPLACE 24 H-STRUCTURES	35500 - Poles and Fixtures	06/01/2019	255,826
Transmission Capital Blanket	B194ARSRE	B194ARSRE T/SW/Non-Specific Work-Station	T0190141	FLINT CREEK SUB TRF P345 50 EAST BUSHING FAILURE	35300 - Station Equipment	10/01/2018	284,512
Transmission Capital Blanket	B194LALRE	B194LALRE T/SW/Non-Specific Work Line	TL030843	HOSSTON - NORTH BENTON REPLACE 40 STRUCTURES	35500 - Poles and Fixtures	10/01/2017	329,446
Transmission Capital Blanket	B194LALRE	B194LALRE T/SW/Non-Specific Work Line	TL030844	HOSSTON - SUPERIOR REPLACE 38 STRUCTURES	35500 - Poles and Fixtures	09/01/2018	256,161
Transmission Capital Blanket	B194LASRE	B194LASRE T/SW/NonSpecificWorkStation-LA	T0200843	SOUTHWEST SHREVEPORT STA CAPITAL PROJ/345KV CB 10510	35300 - Station Equipment	09/01/2018	324,534
Transmission Capital Blanket	B194TXLRE	B194TXLRE T/SW/Non-Specific Work - Line	TL033333	IPC DOMINO - WEST AT CP WO 41 A-2 CONDITIONS	35500 - Poles and Fixtures	06/01/2019	375,183
Transmission Capital Blanket	B194TXSRE	B194TXSRE T/SW/Non-Specific Work Station	T0187995	PIRKEY TRF P345 64 - N AUTO MAJOR MAINTENANCE	35300 - Station Equipment	11/01/2017	272,598
Transmission Capital Blanket	SI194ARLR	SI194ARLR TB/SI/SEP/AR - LINE REHAB	42552460	DYESS - EAST ROGERS LINE 189 2 REPLACE POLES & CROSS ARMS	35500 - Poles and Fixtures	12/01/2016	399,627
Transmission Capital Blanket	SI194ARLR	SI194ARLR TB/SI/SEP/AR - LINE REHAB	42588776	PATTERSON - S NASHVILLE REPL POLES, ARMS, & INSULATORS	35500 - Poles and Fixtures	12/01/2016	265,553
Transmission Capital Blanket	SI194LALR	SI194LALR TB/SI/SEP/LA - LINE REHAB	42586136	HOSSTON - BLOOMBURG REPLACE ARMS & INSULATORS	35500 - Poles and Fixtures	12/01/2016	298,617

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-5:

Please complete the following table for projects responsive to Staff 2-4.

(a) Project Name, (with CCN Docket No., if Any)	(b) Estimated Costs at the Time of ERCOT Review (if Any)	(c) Estimated Costs in First MCPR Entry*	(e) Final Total Project Costs	(f) Last MCPR Where Project Appeared	(g) Percent difference between (c) and (e)

*For a project requiring a CCN, Column (c) must match the entry for "Initial Estimated Project Cost" from the MCPR in which the project first appeared; and for a project not requiring a CCN, column (c) must match the entry for "Final Estimated Project Cost" from the MCPR in which the project first appeared.

Response No. Staff 2-5:

By agreement with Commission Staff, SWEPCO is not including blanket projects in this response and is providing the information concerning blanket projects requested in Staff 2-13 in response to that request. See Staff 2-5 Attachment 1.

Prepared By: William M. Romine Title: Regulatory Consultant Staff
Sponsored By: Wayman L. Smith Title: Dir Trans Planning

SWEPCO TRANSMISSION
Capital Projects

(a) Project Name, (with CCN Docket No., if Any)	(b) Estimated Costs at theTime of ERCOT Review (If Any)[1]	(c) Estimated Costs in First MCPR Entry[2]	(d) First MCPR Where Project Appeared[3]	(e) Final Total Project Costs[4]	(f) Last MCPR Where Project Appeared[5]	(g) Percent difference between (c) and (e)	Footnotes
TA2016806 SWEPCO - Line Rebuild Program	N/A	306,368,045	6/9/2017	204,611,709	N/A	-33%	Footnote 6
Docket 40685:TP2009089 Valliant to NW Texarkana 345 kV	N/A	109,226,405	2014	92,673,383	8/20/2020	-15%	
TA2018706 SWEPCo Station Proactive Rehab	N/A	65,108,537	7/20/2017	34,262,289	8/20/2020	-47%	
TP2013167 T/SWEPCO-TX/Longview Heights -	N/A	27,348,408	6/28/2016	27,089,097	10/19/2018	-1%	
TP2015127 Leaside Way	N/A	27,804,057	N/A	25,983,189	N/A	-7%	Footnote 8
TP2012106 Welsh HVDC Tie	N/A	95,369,840	4/15/2016	17,794,561	2/20/2019	-81%	
TP2009104 Brownlee - North Market 69 kV	N/A	17,191,512	N/A	16,538,199	N/A	-4%	Footnote 8
TP2010100 Evenside-NW Henderson	N/A	11,763,190	8/18/2017	11,171,456	8/20/2020	-5%	
TP2011147 Chamber Springs - Farmington	N/A	13,317,467	N/A	10,668,801	N/A	-20%	Footnote 8
TP2016105 Cass Tap to Roach	N/A	13,511,705	3/20/2018	10,415,229	8/20/2020	-23%	
TP2014154 Ellerbe Road - Lucas 69 kV	N/A	9,404,513		9,628,189		2%	Footnote 9
TP2013165 Broadmoor - Fort Humbug 69 kV:	N/A	6,407,800	N/A	6,516,184	N/A	2%	Footnote 8
TP2014139 Linwood-S Shreveport Line	N/A	7,030,028	N/A	5,577,869	N/A	-21%	Footnote 8
TP2016082 Chambers Spring Reactor	N/A	4,952,104	N/A	5,345,007	N/A	8%	Footnote 8
TP2016038 East Fayetteville	N/A	7,203,768	N/A	4,603,461	N/A	-36%	Footnote 8
TP2018135 Hill Lake	N/A	5,356,602	1/18/2019	3,927,707	N/A	-27%	Footnote 6
TP2017010 Siloam- W Siloam 161kV Rebuild	N/A	5,034,536	N/A	3,797,693	N/A	-25%	Footnote 8
TP2014138 BROOKS STREET - EDWARDS STREET	N/A	3,669,392	N/A	2,780,168	N/A	-24%	Footnote 8
TP2017221 Hallsville South Tap	N/A	3,053,089	2/27/2019	2,511,211	8/20/2020	-18%	
TP2017248 Wedington Tap	N/A	2,779,200	N/A	2,505,491	N/A	-10%	Footnote 8
DP14S0003 SEP/TX/Morton Saline Sub	N/A	10,477,203	6/20/2017	2,454,821	N/A	-77%	Footnote 6
TP2013166 Daingerfield- Jenkins Tap	N/A	2,325,200	7/20/2017	2,385,216	N/A	3%	Footnote 6
TP2011033 Messick 500/345/230kV Station	N/A	56,838,900	N/A	2,258,088	N/A	-96%	Footnote 8
TP2017012 IPC 138 kV Capacitor Bank	N/A	1,985,399	3/20/2018	1,714,728	10/18/2019	-14%	
TA2018039 Shamrock - Nichols (SPS) 115KV	N/A	2,067,780		1,672,341		-19%	Footnote 9
DP08SP003 SEP/LA/Rodessa Substation	N/A	5,901,131	N/A	1,571,766	N/A	-73%	Footnote 8
TP2011022 Logansport 138V: 28.8 Mvar	N/A	1,731,419	N/A	1,558,181	N/A	-10%	Footnote 8
TP2015097 Barite Road TAP POD	N/A	1,859,071	N/A	1,491,192	N/A	-20%	Footnote 8
DP17S0006 BRUSH CREEK - CONST NEW STA	N/A	9,266,206	N/A	1,453,892	N/A	-84%	Footnote 8
TA2018716 East Rogers-Beaver Dam Rehab	N/A	1,714,826	N/A	1,424,271	N/A	-17%	Footnote 8
TP2015106 Letourneau 69kV Capacitor	N/A	1,439,740	1/20/2017	1,247,292	7/20/2018	-13%	
TP2010067 Rock Hill - Springridge Pan-Ha	N/A	21,973,200	8/29/2014	1,171,920	3/20/2017	-95%	
TP2008005 Lake Hawkins Project	N/A	1,646,900	9/23/2015	1,115,468	9/20/2017	-32%	
TA2018715 Flint Creek-Brookline Rehab	N/A	1,172,423	N/A	1,046,254	N/A	-11%	Footnote 8
DR18S0001 SWEPCO Modernization Program	N/A	86,769,878	N/A	1,023,077	N/A	-99%	Footnote 7
WSH U1 GSU TRANFORMER REPLACE	N/A	1,109,192		979,499		-12%	Footnote 9
TP2017116 LeTourneu - Nucor	N/A	1,447,766		927,657		-36%	Footnote 9
TA2018075 SWEPCo SEL/GE Relay Upgrade Pr	N/A	1,921,442	N/A	861,283	N/A	-55%	Footnote 7
TP2019086 Tenaha Station Work	N/A	1,037,394	9/3/2019	815,734	8/20/2020	-21%	
TA2018713 Booneville-WBooneville Rehab	N/A	921,792	N/A	718,637	N/A	-22%	Footnote 8
TA2017035 Arsenal Hill-Shed Road Relo	N/A	3,221,992	N/A	662,747	N/A	-79%	Footnote 8
TP2015155 North Huntington Relay Upgrade	N/A	675,626	N/A	565,461	N/A	-16%	Footnote 8
TA2018714 SEP-Whitney-Kilgore-RHB	N/A	532,006	N/A	461,141	N/A	-13%	Footnote 7
TA2017938 Transmission Access Control	N/A	10,615,441	N/A	460,393	N/A	-96%	Footnote 7
TP2016046 Vernon Main:Add capacitor bank	N/A	3,167,184		437,317		-86%	Footnote 9
TA2018108 T/SP/RobsonRD-Kingston-RHB	N/A	534,501	N/A	417,140	N/A	-22%	Footnote 7
TA2012145 PRP for Interstate 49 project	N/A	7,281,500	N/A	354,697	N/A	-95%	Footnote 8
TP2015020 Godfrey Road POD	N/A	2,522,706	N/A	287,164	N/A	-89%	Footnote 8

Staff 2-5 Footnotes

#	Footnotes
1	None of the SWEPCO projects had an ERCOT review since the projects are all in SPP.
2	Since many of the projects have components in TX, LA and AR, not all components were reported on MCPRs. Only components physically located in TX are reported on MCPRs, and in some cases, the TX components were inadvertently omitted from the MCPRs. Due to these issues, the estimate reported in column "c" is the amount the company has authorized for all components in the project.
3	To the extent components of the project were reported on MCPRs, this is the date of the first component submitted on a MCPR.
4	The cost reported in this column is the amount being requested for inclusion in rate base in this filing. Since many of the projects span several years, some project components may have been placed in service prior to this case period and some project components will have costs in future periods.
5	If there is a date in this column, it is the date of the project's last component being reported as final on the MCPR.
6	If a project has a date in column "d" and a N/A in column "f", it indicates that the project has at least one component still being reported on a MCPR.
7	This program is comprised of multiple components that, due to physical location and/or capital expenditure level, may not require an MCPR entry. Data provided is at the program level.
8	This project had no components physically located in Texas, thus had no components reported on MCPR.
9	This project was totally located in Texas with very few components; however, the project was inadvertently not reported on a MCPR.

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Question No. Staff 2-6:

For each facility responsive to question 2-4 please provide:

a. The date the facility was energized.
b. Whether or not the facility is currently providing service.
c. Explain the need for the facility in detail, including whether the project met a need identified in the utility's system planning studies.
d. Identify if the facility was reviewed by SPP. If so, please provide the documents that contain SPP's conclusions.
e. A breakdown by FERC account (and subaccount) for the total project costs booked to each account that were associated with the project.
f. For any facilities that transform voltage between transmission and distribution voltages, which were not endorsed by SPP, provide the following:
    1. The relevant portions of system planning studies that support the need for the project.
    2. The load growth rate in the area planned to be served by the project during each of the five calendar years immediately before the project was energized.
    3. The load growth rate in the area served by the project during each calendar year starting with the year that the project was initially energized.
    4. Peak load projected to be served by the project as forecasted by the applicant and consistent with the planning study for the project provided in Schedule V1-M-1.
    5. Peak load served by the project during each year since the project was initially energized.
g. For any facilities that transforms voltage between transmission and distribution voltages, which were not endorsed by SPP please state if the service area is dually certificated with another utility, and explain how you determined which portion of expected load growth that you will serve as opposed to your sister utility?

Response No. Staff 2-6:

See Staff 2-6 Attachment 1 for the responses to subparts (a.) through (e.). See Staff 2-6 Attachment 2 for the applicable SPP Studies requested in subpart (d.). See Staff 2-6 Attachment 3 for the applicable Notices to Construct requested in subpart (d.), and See Staff 2-6 Attachment 4 for the requested information on facilities that transform voltage between transmission and distribution voltages requested in subparts (f.) and (g.).

STAFF 2-6 Attachment 2 responsive to this request is voluminous and is provided separately on the PUC Interchange.

Prepared By: William M. Romine — Title: Regulatory Consultant Staff

Sponsored By: Drew W. Seidel — Title: VP Dist Region Opers

Sponsored By: Wayman L. Smith — Title: Dir Trans Planning

Staff 2-6	a	b	c	d			e											
	The date the facility was energized.	Whether or not the facility is currently providing service. (Y/N)	Explain the need for the facility (see answer to Staff 2-4 and the category definitions below)	Identify if the facility was reviewed by SPP. If so, please provide the documents that contain SPP's conclusions.			FERC Account											
Description				Reviewed by SPP (Y/N)	SPP NTC #	SPP Study	35000 - Land	35010 - Land Rights	35200 - Structures and Improvements	35300 - Station Equipment	35316 - Station Equipment-SmartGrid	35400 - Towers and Fixtures	35500 - Poles and Fixtures	35600 - Overhead Conductors, Device	35616 - OVH Cond-Dev-Smart Grid	35700 - Underground Conduit	35816 - Ug Cond-Dev-Smart Grid	Grand Total
TA2016806 SWEPCO - Line Rebuild Program	03/01/2020	Y	Asset Improvement	N	N/A	N/A	0	16,677,755	7,037,499	9,416,303	871,596	0	173,037,101	44,157,065	14,450,780	77,738	877	264,611,709
TSLANKTSW Trans Capital Blanket - SWEPCo	03/01/2020	Y	Reliability	N	N/A	N/A	0	54,183	55,436	14,711,356	196,954	648,377	21,717,305	1,426,373	0	0	0	38,909,881
TA2018706 SWEPCo Station Proactive Rehab	09/01/2019	Y	Asset Improvement	N	N/A	N/A	0	0	4,445,010	28,563,468	1,253,812	0	0	0	0	0	0	34,262,289
TA2015706 Replace/Refurbish - SWEPCo	03/01/2020	Y	Asset Improvement	N	N/A	N/A	0	0	484,502	9,637,019	519,516	0	17,239,856	99,746	0	0	0	27,980,644
TA2015713 Telecom Fiber Build Out-SWEPCo	01/01/2020	Y	Reliability	N	N/A	N/A	0	0	6,567	268,934	536,101	0	0	1,662,204	9,886,670	3,474,307	51,225	15,886,007
TA2016924 SWP Region Major Eq/Spares Pro	12/01/2019	Y	Reliability	N	N/A	N/A	0	0	0	7,763,206	0	0	0	0	0	0	0	7,763,206
TA2013006 2013/2014 Asset Replacement	07/01/2017	Y	Asset Improvement	N	N/A	N/A	0	6	2,702	6,619,733	0	0	355,466	153	0	0	0	6,978,060
TA2013216 I/SW/Telecom Upgrades	02/01/2019	Y	Reliability	N	N/A	N/A	0	0	81,764	3,604,117	63,277	0	0	2,689,419	29,278	28,051	0	6,495,906
TP2016082 Chambers Spring Reactor	11/01/2018	Y	Reliability	N	N/A	N/A	0	0	213,800	5,131,207	0	0	0	0	0	0	0	5,345,007
TA2018806 SWEPCo Region Failure Program	02/01/2020	Y	Asset Improvement	N	N/A	N/A	0	0	311,498	2,244,376	0	0	0	767,257	0	0	0	3,323,130
TA2018039 Shamrock - Nichols (SPS) 115KV	12/01/2018	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	1,672,341	0	0	0	0	1,672,341
TA2018716 East Rogers Beaver Dam Rehab	12/01/2017	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	996,989	427,281	0	0	0	1,424,271
TA2012102 Purchase/Rebuild Maj Eqp Trans	12/01/2016	Y	Asset Improvement	N	N/A	N/A	0	0	0	1,408,724	0	0	0	0	0	0	0	1,408,724
TA2018715 Flint Creek -Brookline Rehab	07/01/2018	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	0	1,046,254	0	0	0	1,046,254
TA2018075 SWEPCo SFI/GF Relay Upgrade Pr	03/01/2020	Y	Asset Improvement	N	N/A	N/A	0	0	0	3,437	857,845	0	0	0	0	0	0	861,283
TP2019086 Tenaha Station Work	12/01/2019	Y	Asset Improvement	N	N/A	N/A	0	0	698,189	117,545	0	0	0	0	0	0	0	815,734
TA2018713 Booneville-Wilbonneville Rehab	08/01/2018	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	718,647	0	0	0	0	718,647
STARR0910 2009-2010 Station Rehab Prog	09/01/2016	Y	Asset Improvement	N	N/A	N/A	0	0	0	626,350	0	0	0	0	0	0	0	626,350
TA2018714 SLP-Whitney-Kilgore-Rifle	09/01/2018	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	461,141	0	0	0	0	461,141
TA2017938 Transmission Access Control	02/01/2019	Y	Asset Improvement	N	N/A	N/A	0	0	460,393	0	0	0	0	0	0	0	0	460,393
TA2018108 I/SP/Robspin/KJ Kingston RHB	12/01/2019	Y	Asset Improvement	N	N/A	N/A	0	0	0	0	0	0	417,140	0	0	0	0	417,140
TP2016105 Cass Tap to Roach	10/01/2019	Y	Customer Service	N	N/A	N/A	18,465	47,510	1,297,107	6,465,793	265,708	0	1,937,816	65,791	306,769	0	0	10,404,960
TP2015127 Leaside Way	12/01/2019	Y	Customer Service	N	N/A	N/A	302,877	283,096	490,638	12,504,952	0	0	11,424,581	821,374	0	0	0	25,827,518
TP2016038 East Fayetteville	01/01/2019	Y	Customer Service	N	N/A	N/A	36,795	28,149	1,246,316	2,304,599	0	0	949,736	168,819	459,676	4,686	4,686	4,603,461
TP2018135 Hill Lake	08/01/2019	Y	Customer Service	N	N/A	N/A	0	25,993	620,443	1,257,310	35,127	30,322	1,818,617	139,905	0	0	0	3,927,707
TP2017221 Hallsville South Tap	12/01/2019	Y	Customer Service	N	N/A	N/A	0	21,031	353,454	1,221,970	35,976	0	742,054	136,725	0	0	0	2,511,211
TP2017248 Wedington Tap	07/01/2019	Y	Customer Service	N	N/A	N/A	0	31,794	417,962	1,790,817	65,068	0	0	93,286	40,748	65,088	728	2,505,491
DP1450003 SFP/TX/Morton Saline Sub	09/01/2018	Y	Distribution Load Increase	N	N/A	N/A	0	0	175,074	966,307	11,712	0	1,744,873	56,909	0	0	0	2,954,875
TP2015097 Rante Road TAP POD	10/01/2016	Y	Customer Service	N	N/A	N/A	0	29,364	722,764	634,861	0	0	96,385	28,315	0	0	0	1,491,192
TP2008005 Lake Hawkins Project	01/01/2017	Y	Customer Service	N	N/A	N/A	0	0	0	320,935	0	0	556,173	238,360	0	0	0	1,115,468
TP2017116 LeTourneu - Nutor	02/01/2019	Y	Customer Service	N	N/A	N/A	0	11,793	128,577	477,038	5,265	0	86,772	11,281	6,930	0	0	927,657
TA2017035 Arsenal Hill-Shed Road Relo	03/01/2020	Y	Customer Service	N	N/A	N/A	0	0	0	0	0	0	638,160	24,587	0	0	0	662,747
TA2012145 PRP for Interstate 49 project	05/01/2014	Y	Customer Service	N	N/A	N/A	0	25,932	0	0	0	0	208,880	119,885	0	0	0	354,697
TP2015020 Godfrey Road POD	02/01/2017	Y	Customer Service	N	N/A	N/A	0	6,761	0	38,669	0	0	196,867	44,927	0	0	0	287,164
TREESSWEP Forestry T&D Widening - SWEPCo	03/01/2020	Y	Reliability	N	N/A	N/A	0	0	0	0	0	0	0	2,737,054	0	0	0	2,737,054
WSH U1 GSU TRANFORMER REPLACE	#N/A	Y	Reliability	N	N/A	N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PPBSWEPCO Production Plant Blkt - SWEPCo	08/01/2018	Y	Reliability	N	N/A	N/A	0	0	0	260,136	0	0	0	0	0	0	0	260,136
DP1750006 BRUSH CREEK - CONST NEW STA	07/01/2018	Y	Distribution Load Increase	N	N/A	N/A	0	0	176,622	916,148	0	0	252,780	108,342	0	0	0	1,453,892
DP0850003 SFP/LA/Rodessa Substation	02/01/2017	Y	Distribution Load Increase	N	N/A	N/A	0	2	0	887,076	0	1	505,772	178,915	0	0	0	1,571,766
TP2012106 Welsh HVDC Tie	06/01/2017	Y	Reliability	N	N/A	N/A	0	0	0	17,794,561	0	0	0	0	0	0	0	17,794,561
DP1850001 SWEPCO Modernization Program	03/01/2020	Y	Reliability	N	N/A	N/A	0	0	0	648,831	374,747	0	0	0	0	0	0	1,023,577
TP2015155 North Huntington Relay Upgrade	06/01/2017	Y	Reliability	N	N/A	N/A	0	0	3	565,458	0	0	0	0	0	0	0	565,461
TP2016046 Vernon Main Add capacitor bank	09/01/2018	Y	Reliability	N	N/A	N/A	0	0	0	0	0	0	365,248	72,069	0	0	0	437,317
TP2009089 Valliant to NW Texarkana 345 k	12/01/2016	Y	RTO	Y	20096	SPP Priority Project Phase 2 Final Report	324,658	10,477,026	0	79,965	0	29,220	57,255,642	24,506,882	0	0	0	92,674,383
TP2013167 T/SWEPCO-TX/Longview Heights -	04/01/2019	Y	RTO	Y	200246	2014 ITPNT	0	367,909	0	1,474,248	0	0	23,744,783	1,503,158	0	0	0	27,089,097
TP2009104 Brownlee - North Market 69 kV	04/01/2018	Y	RTO	Y	200216	2013 ITPNT	6,684	342,561	0	711,851	0	0	13,013,371	2,463,730	0	0	0	16,538,199
TP2010100 Lwmode NW Henderson	06/01/2018	Y	RTO	Y	200216	2013 ITPNT	0	0	401,365	1,038,973	0	106,633	6,420,124	2,737,597	0	145,296	1,579	11,171,458
TP2011147 Chamber Springs - Farmington	04/01/2017	Y	RTO	Y	200216	2013 ITPNT	0	95,244	0	1,039,914	0	0	6,673,550	2,860,093	0	0	0	10,668,801
TP2013165 Broadmoor - Fort Humbug 69 kV	06/01/2019	Y	RTO	Y	200246	2013 ITPNT	0	256,297	60,618	1,299,152	0	0	4,159,307	740,811	0	0	0	6,516,184
TP2014154 Ellerbe Road - Lucas 69 kV	02/01/2019	Y	RTO	Y	200339	DPA-2013-March-296	0	84,181	29,222	515,478	75,686	0	7,353,042	1,130,136	365,141	74,478	828	9,628,189
TP2017010 Sibcam - W Sibcam 161kV Rebuild	05/01/2019	Y	RTO	Y	200431	2017 ITP10	0	389,472	112,234	678,079	130,343	0	1,881,363	447,016	155,410	3,776	1	3,797,693
TP2014139 Linwood-S Shreveport Line	06/01/2018	Y	RTO	Y	200406	2016 ITPNT	0	224,685	0	0	0	0	4,284,700	782,193	286,296	0	0	5,577,869
TP2014138 BROOKS STREET - EDWARDS STREET	12/01/2017	Y	RTO	Y	200314	2015 ITPNT	0	81,525	0	0	0	0	2,482,860	154,991	60,792	0	0	2,780,168
TP2013166 Daingerfield- Jenkins Tap	11/01/2017	Y	RTO	Y	200246	2014 ITPNT	0	798,338	0	0	0	0	1,711,240	971,794	104,344	0	0	3,585,716
TP2011033 Messick 500/345/230kV Station	06/01/2016	Y	RTO	Y	200217	2013 ITPNT	0	0	0	7,259,118	0	0	(884)	(146)	0	0	0	7,258,088
TP2017012 IPC 138 kV Capacitor Bank	12/01/2018	Y	RTO	Y	204446	2017 ITPNT	0	0	364,156	1,273,127	77,645	0	0	0	0	0	0	1,714,728
TP2011022 Logansport 138V, 28.8 Mvar	09/01/2016	Y	RTO	Y	200122	2010 STEP	35,728	0	0	1,522,455	0	0	0	0	0	0	0	1,558,183
TP2010067 Rock Hill - Springridge Pan Ha	02/01/2017	Y	RTO	Y	200217	2013 ITPNT	0	5,645	0	258,710	0	0	552,387	355,179	0	0	0	1,171,920
TP2015106 Letourneau 69kV Capacitor	06/01/2017	Y	RTO	Y	200361	2014 ITPNT	0	0	166,171	1,081,120	0	0	0	0	0	0	0	1,247,292
TA2016930 SWLPCO 2016 May Storm - Texark	06/01/2017	Y	Storm Recovery	N	N/A	N/A	0	0	0	0	0	864,194	10,620	0	0	0	0	874,814

Asset Improvement projects are designed to repair or replace aging and obsolete transmission equipment in order to mitigate potential problems that can cause an interruption of service and implement corrective actions to maintain the reliable operation of the transmission equipment. These projects include both line and station equipment and have a significant impact on reducing outages and improving customer reliability.

Customer Service projects include new or expanded service to customers, relocation projects, and projects that are different from the other project categories including miscellaneous projects or transmission projects that support other business units within SWEPCO.

Distribution Load Increase: Distribution Load Increase can mean either a new customer requested service in an area where there were no existing distribution facilities or the load being served by the existing distribution substation(s) in the area increased or was projected to increase to the point it was causing an overload or near overload to the existing station transformer(s).

Reliability projects are designed to upgrade or replace transmission equipment in order to mitigate potential problems that could cause an interruption of service, implement corrective actions to maintain the reliable operation of the transmission system, expand or upgrade the communications systems necessary to ensure secure and reliable system operation, and provide major equipment spares.

RTO projects are those that are needed to address potential NERC, SPP and/or AEP reliability criterion violations and are required to be submitted through the SPP transmission planning process.

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SPP
Notification to Construct

June 30, 2010 SPP-NTC-20096

Mr. Paul Hassink
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Priority Projects

Dear Mr. Hassink,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachment O, Section VIII, of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as the Designated Transmission Owner, to construct the Network Upgrades.

During the April 27, 2010 meeting, the SPP Board of Directors approved the Group 2 Priority Projects as presented in the SPP Priority Projects, Rev. 1 report with the provision that NTC letters for the projects would not be issued until the Federal Electric Reliability Corporation ("FERC") made a favorable ruling on the highway/byway cost allocation methodology. On June 17, 2010, FERC issued Order 131 FERC ¶ 61,252 approving the Highway/Byway cost allocation methodology. On June 23, 2010, the SPP Board of Directors authorized issuance of NTCs for the Priority Projects.

New Network Upgrades

Project ID: 936
Project Name: Line – Valliant - NW Texarkana 345 kV
Estimated In-Service Date for Project: 10/01/2014
Estimated Cost for Project: $131,451,250

Network Upgrade ID: 11236
Network Upgrade Description: 345 kV from Valliant substation to NW Texarkana substation
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Raja Sundararajan, Matt Vermillion
TWG Representative: Matthew McGee

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Categorization: High Priority
Network Upgrade Specification: Build 76 miles of 345 kV transmission; 3000 amp capacity or greater, from Valliant substation to NW Texarkana substation. Upgrade the Valliant and NW Texarkana substations with the necessary breakers and terminal equipment.
Network Upgrade Justification: Priority Projects
Estimated In-Service Date for Network Upgrade: 10/01/2014
Estimated Cost for Network Upgrade (current day dollars): $131,451,250
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Cost Estimate: October 2009

Project ID: 937
Project Name: Tulsa Power Station Reactor
Estimated In-Service Date for Project: 10/01/2011
Estimated Cost for Project: $842,847

Network Upgrade ID: 11237
Network Upgrade Description: Tulsa Power Station 138 kV reactor
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Raja Sundararajan, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: High Priority
Network Upgrade Specification: Install a 2% reactor at the Tulsa Power Station limiting flow on the Tulsa Power Station-Riverside 138 kV line.
Network Upgrade Justification: Priority Projects
Estimated In-Service Date for Network Upgrade: 10/01/2011
Estimated Cost for Network Upgrade (current day dollars): $842,847
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Cost Estimate: October 2009

Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this Notification to Construct, pursuant to Attachment O, Section VIII.6 of the SPP OATT, in addition to providing a construction schedule for the Network Upgrade(s). Failure to provide a written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

Notification of Commercial Operation

Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of the Network Upgrade(s) as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress

On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking purposes, SPP requires AEP to submit updates on the status of the Network Upgrade(s) on a quarterly basis in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to these Projects, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Bruce A. Rew

Bruce Rew
Vice President, Engineering
Phone (501) 614-3214 • Fax: (501) 821-3198 • BRew@spp.org

cc: Carl Monroe, Les Dillahunty, Katherine Prewitt, Paul Johnson, Richard Ross, Raja Sundararajan, Matt Vermillion, Matthew McGee, Scott Rainbolt, Robert Bradish

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SPP-NTC-20122

SPP
Notification to Construct

February 14, 2011

Mr. Paul Hassink
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Hassink,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachment O, Section VI, of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as the Designated Transmission Owner, to construct the Network Upgrade(s).

On January 25, 2011, the Southwest Power Pool ("SPP") Board of Directors approved the Network Upgrade(s) listed below to be constructed.

New Network Upgrades

Project ID: 479
Project Name: Line – Georgia Pacific - Keatchie 138 kV Ckt 1
Need Date for Project: 6/1/2016
Estimated Cost for Project: $14,500,000

Network Upgrade ID: 10616
Network Upgrade Description: Rebuild 12.63 miles of the Georgia Pacific - Keatchie 138 kV line from 795 ACSR to 1272 ACSR.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: Upgrade the line to 287 MVA emergency rating.
Network Upgrade Justification: To address the overload of Georgia Pacific - Keatchie 138 kV line for the loss of Carthage REC POD - Rock Hill 138 kV.
Need Date for Network Upgrade: 6/1/2016
Estimated Cost for Network Upgrade (current day dollars): $14,500,000
Cost Allocation of the Network Upgrade: Base Plan

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Estimated Cost Source: AEP

Project ID: 882
Project Name: Line – Rock Hill - Carthage 69 kV Ckt 1 rebuild
Need Date for Project: 6/1/2014
Estimated Cost for Project: $13,500,000

Network Upgrade ID: 11171
Network Upgrade Description: Rebuild the 11.4-mile Rock Hill - Carthage line from 336 ACSR to 1272 ACSR and remove switches in middle of line. Upgrade necessary terminal equipment at Carthage and Rock Hill substations.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: Upgrade line to 143 MVA emergency rating.
Network Upgrade Justification: To address the overload of Rock Hill - Carthage 69 kV Ckt 1 for the loss of Beckville - Louisiana Pacific 69 kV or Rock Hill - Beckville 69 kV.
Need Date for Network Upgrade: 6/1/2014
Estimated Cost for Network Upgrade (current day dollars): $13, 500,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Project ID: 1081
Project Name: Line – Hooks - Lone Star Ordinance 69 kV Ckt 1
Need Date for Project: 6/1/2013
Estimated Cost for Project: $2,100,000

Network Upgrade ID: 11421
Network Upgrade Description: Rebuild 1.68-mile Hooks - Lone Star Ordinance Tap 69 kV line. Replace switch at Lone Star Ordinance substation.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: Upgrade line to 143 MVA emergency rating.
Network Upgrade Justification: To address the overload of Hooks - Lone Star Ordinance 69 kV Ckt 1 for the loss of New Boston - North New Boston 69 kV.
Need Date for Network Upgrade: 6/1/2013
Estimated Cost for Network Upgrade (current day dollars): $2,100,000

Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Project ID: 30296
Project Name: Device – Winnsboro 138 kV
Need Date for Project: 6/1/2016
Estimated Cost for Project: $1,166,400

Network Upgrade ID: 50334
Network Upgrade Description: Install a new 28.8 Mvar capacitor bank at Winnsboro 138 kV substation.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: Install capacitor of size 28.8 Mvar.
Network Upgrade Justification: To address low voltages in the Mineola area for the loss of ExxonMobil - Perdue 138 kV.
Need Date for Network Upgrade: 6/1/2016
Estimated Cost for Network Upgrade (current day dollars): $1,166,400
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Project ID: 30298
Project Name: Device – Logansport 138 kV
Need Date for Project: 6/1/2016
Estimated Cost for Project: $1,166,400

Network Upgrade ID: 50336
Network Upgrade Description: Install 28.8 Mvar capacitor bank at Logansport 138 kV substation.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: Install capacitor of size 28.8 Mvar.
Network Upgrade Justification: To address low voltages in the Logansport area for the loss of the lines connecting to Western Electric 138 kV bus.
Need Date for Network Upgrade: 6/1/2016
Estimated Cost for Network Upgrade (current day dollars): $1,166,400
Cost Allocation of the Network Upgrade: Base Plan

Estimated Cost Source: AEP

Upgrades with Modifications

Previous NTC number: 20000
Previous NTC Issue Date: 2/13/2008
Project ID: 391
Project Name: Line – Lone Star South - Pittsburg 138kV Ckt 1
Need Date for Project: 06/01/2012
Estimated Cost for Project: $300,000

Network Upgrade ID: 10509
Network Upgrade Description: Upgrade necessary terminal equipment at Lone Star South and Pittsburg 138 kV substations, not including the replacement of switches at Pittsburg substation.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Reason For Change: Scope change. AEP re-rated its switches to higher ratings, so the portion of the project to replace switches at Pittsburg substation is no longer necessary.
Categorization: Regional reliability
Network Upgrade Specification: Upgrade facilities to 354 MVA emergency rating.
Upgrade Justification: To address the overload due to loss of Petty - Chapel Hill REC 138 kV.
Need Date for Network Upgrade: 06/01/2012
Estimated Cost for Network Upgrade (current day dollars): $300,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Previous NTC number: 20073
Previous NTC issue Date: 2/8/2010
Project ID: 546
Project Name: Multi – Hobart - Carnegie South - Southwestern Station 138 kV Ckt 1
Need Date for Project: 06/01/2021
Estimated Cost for Project: $44,500,000

Network Upgrade ID: 10696 & 10697
Network Upgrade Description: Reconductor the 14.37-mile Southwest Station - Carnegie 138 kV line from 795 ACSR to 1272 ACSR. Upgrade necessary terminal equipment.
Network Upgrade Owner: AEP

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MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Reason For Change: Timing change. This project's previous RTO Determined Need Date was 6/1/2013. The 2010 RTO Determined Need Date is 6/1/2021.
Categorization: Regional reliability
Network Upgrade Specification: Upgrade the line to 235 MVA emergency rating.
Upgrade Justification: To address the overload of Carnegie - Southwest Station 138 kV for the loss of Oney - Washita 138 kV or other various contingencies.
Need Date for Network Upgrade: 6/1/2021
Estimated Cost for Network Upgrade (current day dollars): $16,000,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Network Upgrade ID: 10695
Network Upgrade Description: Rebuild the 26.2-mile Carnegie - Hobart Jct. 138 kV line from 397 ACSR to 1272 ACSR. Upgrade necessary terminal equipment.
Network Upgrade Owner: AEP
MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Reason For Change: Timing change. This project's previous RTO Determined Need Date was 6/1/2013. The 2010 RTO Determined Need Date is 6/1/2021.
Categorization: Regional reliability
Network Upgrade Specification: Upgrade the line to 287 MVA emergency rating.
Upgrade Justification: To address the overload of Carnegie - Hobart Junction 138 kV for the loss of Oney - Washita 138 kV or other various contingencies.
Need Date for Network Upgrade: 6/1/2021
Estimated Cost for Network Upgrade (current day dollars): $28,500,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Previous NTC number: 20048, 20016
Previous NTC Issue Date: 9/18/2009
Project ID: 30148
Project Name: Line – Bann - Lone Star Ordinance 69 kV Ckt 1
Need Date for Project: 6/1/2013
Estimated Cost for Project: $6,600,000

Network Upgrade ID: 50156
Network Upgrade Description: Rebuild 5.4 miles of the Bann - Lone Star Ordinance 69 kV with 1272 ACSR. Upgrade necessary terminal equipment.
Network Upgrade Owner: AEP

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MOPC Representative: Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan
TWG Representative: Matthew McGee
Reason For Change: Scope change. In early 2009, SPP identified the scope of this project would be to replace a switch and rebuild the line. However, based on reduced loading information in late 2009, the project was modified to replace the switch only. Now in the 2010 STEP, the loading requires the line to be rebuilt and different terminal equipment upgraded.
Categorization: Regional reliability
Network Upgrade Specification: Upgrade the line to 121 MVA emergency rating.
Upgrade Justification: To address the overload of Bann - Lone Star Ordinance 69 kV Ckt 1 for the loss of New Boston - North New Boston 69 kV.
Need Date for Network Upgrade: 6/1/2013
Estimated Cost for Network Upgrade (current day dollars): $6,600,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP

Withdrawal of Upgrades

Previous NTC number: 20000
Previous NTC issue Date: 2/13/2008
Project ID: 388
Project Name: Line – New Boston - North New Boston 69 kV Ckt 1

Network Upgrade ID: 10506
Network Upgrade Description: Replace two sets of switches at New Boston substation on the New Boston to North New Boston 69 kV line.
Reason For Change: AEP re-rated its switches to higher ratings, so the project is no longer necessary.

Withdrawal of Network Upgrade

AEP has been made aware of all Network Upgrades withdrawn through the expansion plan process. This letter is the formal notification to stop any further work on this Network Upgrade(s), collect any cost associated with the Network Upgrade(s), and provide this information to SPP within 90 days of the date of this NTC.

Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, pursuant to Attachment O, Section VI.6 of the SPP OATT, in addition to providing a construction schedule for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

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SPP-NTC-20122

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required in the formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking purposes, SPP requires AEP to submit updates on the status of the Network Upgrade(s) on a quarterly basis in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Lanny Nickell
Vice President, Engineering
Phone (501) 614-3232 • Fax: (501) 821-3198 • lnickell@spp.org

cc: Carl Monroe, Katherine Prewitt, Paul Johnson, Richard Ross, Matt Vermilion, Raja Sundararajan, Matthew McGee, Scott Rainbolt, Robert Bradish

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SPP-NTC-200216

SPP
Notification to Construct

February 19, 2013

Mr. Paul Hassink
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Hassink,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachment O, Section VI, of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as the Designated Transmission Owner, to construct the Network Upgrade(s).

On January 29, 2013, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed.

New Network Upgrades

Project ID: 451
Project Name: Line - Chamber Springs - Farmington 161 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $12,705,537

Network Upgrade ID: 10583
Network Upgrade Name: Chamber Springs - Farmington REC 161 kV Ckt 1
Network Upgrade Description: Rebuild and reconductor 11.1-mile 161 kV line from Chamber Springs to Farmington REC with 2-959.6 ACSR/TW. Upgrade wavetraps, CT ratios, and relay settings at Chamber Springs.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 360 MVA.
Network Upgrade Justification: To address the overload of Chamber Springs -

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SPP-NTC-200216

Farmington 161 kV Ckt 1 for the outage of the Tontitown - Chamber Springs 345 kV line or Tontitown 345/161 kV transformer or other contingencies.
Estimated Cost for Network Upgrade (current day dollars): $12,705,537
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 478
Project Name: Line - Forbing Tap - South Shreveport 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $1,221,505

Network Upgrade ID: 10615
Network Upgrade Name: Forbing Tap - South Shreveport 69 kV Ckt 1
Network Upgrade Description: Rebuild 2.3-mile 69 kV line from Forbing to South Shreveport with 1233.6 ACSR/TW.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 121 MVA.
Network Upgrade Justification: To address the overload of Forbing Tap - South Shreveport 69 kV Ckt 1 for the outage of Broadmoor - Fort Humbug 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $1,221,505
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 12/10/2012

Project ID: 501
Project Name: Line - Evenside - Northwest Henderson 69 kV
Need Date for Project: 6/1/2018
Estimated Cost for Project: $11,980,465

Network Upgrade ID: 10646
Network Upgrade Name: Evenside - Northwest Henderson 69 kV Ckt 1
Network Upgrade Description: Rebuild 6.4-mile 69 kV line from Evenside to Northwest Henderson with 1233.6 ACSR/TW. Replace breaker at Evenside.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability

SPP-NTC-200216

Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 96 MVA.
Network Upgrade Justification: To address the overload of Evenside - Northwest Henderson 69 kV Ckt 1 for the outage of Northwest Henderson - Poynter 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $11,980,465
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 504
Project Name: Line - Brownlee - North Market 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $12,424,849

Network Upgrade ID: 10649
Network Upgrade Name: Brownlee - North Market 69 kV Ckt 1
Network Upgrade Description: Rebuild 4.7-mile 69 kV line from Brownlee to North Market with 1233.6 ACSR/TW.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Brownlee - North Market 69 kV Ckt 1 for the outage Arsenal Hill - Shed Road 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $12,424,849
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 512
Project Name: Line - Ellerbe Road - Forbing Tap 69 kV
Need Date for Project: 6/1/2018
Estimated Cost for Project: $8,174,689

Network Upgrade ID: 10657
Network Upgrade Name: Ellerbe Road - Forbing Tap 69 kV Ckt 1
Network Upgrade Description: Rebuild 2.0-mile 69 kV line from Ellerbe Road to Forbing Road with 1233.6 ACSR/TW.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion

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TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 121 MVA.
Network Upgrade Justification: To address the overload of Ellerbe Road - Forbing Road 69 kV Ckt 1 for the outage of Broadmoor - Fort Humbug 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $8,174,689
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 681
Project Name: Line - Broadmoor - Fern Street 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $4,923,124

Network Upgrade ID: 10898
Network Upgrade Name: Broadmoor - Fern Street 69 kV Ckt 1
Network Upgrade Description: Rebuild 1-mile portion of the 69 kV line from Broadmoor to Fern Street with 1233.6 ACSR/TW. Replace switches at Fern Street.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 94 MVA.
Network Upgrade Justification: To address the overload of Broadmoor - Fern Street 69 kV Ckt 1 for the outage of Forbing Tap - South Shreveport 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $4,923,124
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 879
Project Name: Line - Bluebell - Prattville 138 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $10,241,314

Network Upgrade ID: 11158
Network Upgrade Name: Bluebell - Prattville 138 kV Ckt 1
Network Upgrade Description: Rebuild 9.0-mile 138 kV line from Prattville to Bluebell with 1926.9 ACSR/TW.

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Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 287 MVA.
Network Upgrade Justification: To address the overload of Prattville - Bluebell 138 kV Ckt 1 for the outage of Explorer Glenpool - Riverside 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $10,241,314
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30436
Project Name: Line - New Gladewater - Perdue 138 kV
Need Date for Project: 6/1/2016
Estimated Cost for Project: $1,000,000

Network Upgrade ID: 50531
Network Upgrade Name: New Gladewater - Perdue 138 kV Ckt 1
Network Upgrade Description: Replace 138 kV breaker at Perdue.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 272 MVA.
Network Upgrade Justification: To address the overload of New Gladewater - Perdue 138 kV Ckt 1 for the outage of Diana - Perdue 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $1,000,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30471
Project Name: Line - Dekalb - New Boston 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $16,548,317

Network Upgrade ID: 50567
Network Upgrade Name: Dekalb - New Boston 69 kV Ckt 1
Network Upgrade Description: Rebuild 13.2-mile 69 kV line from Dekalb to New

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Boston with 1233.6 ACSR/TW. Upgrade CT ratios and relay settings at New Boston.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 69 MVA.
Network Upgrade Justification: To address the overload of Dekalb - New Boston 69 kV Ckt 1 for the outage of Welsh REC - Wilkes 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $16,548,317
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30472
Project Name: Line - Hardy Street - Waterworks 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $7,519,658

Network Upgrade ID: 50568
Network Upgrade Name: Hardy Street - Waterworks 69 kV Ckt 1
Network Upgrade Description: Rebuild 1.6-mile 69 kV line from Hardy Street to Waterworks with 1233.6 ACSR/TW.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 121 MVA.
Network Upgrade Justification: To address the overload of Hardy Street - Waterworks 69 kV Ckt 1 for the outage of Flournoy 138/69/12.47 kV Transformer Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,519,658
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30473
Project Name: Line - Midland REC - North Huntington 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $1,829,026

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Network Upgrade ID: 50569
Network Upgrade Name: Midland REC - North Huntington 69 kV Ckt 1
Network Upgrade Description: Rebuild 4.0-mile 69 kV line from Midland REC to North Huntington with 1233.6 ACSR/TW. Upgrade CT ratios, relay settings, and jumpers at North Huntington.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Midland REC - North Huntington 69 kV Ckt 1 for the outage of Bonanza - Hackett - Reeves Road 161 kV Ckt 1 and Bonanza Tap 161 kV.
Estimated Cost for Network Upgrade (current day dollars): $1,829,026
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30474
Project Name: Line - Midland - Midland REC 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $5,653,353

Network Upgrade ID: 50570
Network Upgrade Name: Midland - Midland REC 69 kV Ckt 1
Network Upgrade Description: Rebuild 1.3-mile 69 kV line from Midland to Midland REC with 1233.6 ACSR/TW. Upgrade CT ratios, relay settings, switches, and station conductors at Midland.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 217 MVA.
Network Upgrade Justification: To address the overload of Midland - Midland REC 69 kV Ckt 1 for the outage: Bonanza - Hackett - Reeves Road 161 kV Ckt 1 and Bonanza Tap 161 kV; or Bonanza - Bonanza Tap 161 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $5,653,353
Cost Allocation of the Network Upgrade: Base Plan

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Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30475
Project Name: Line - Howe Interchange - Midland 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $9,145,130

Network Upgrade ID: 50571
Network Upgrade Name: Howe Interchange - Midland 69 kV Ckt 1
Network Upgrade Description: Rebuild 7.0-mile portion of the 69 kV line from Howe Interchange to Midland with 1233.6 ACSR/TW. The portion of line to be rebuilt is from the state line to Midland. Upgrade CT ratios, relay settings, switches, and station conductors at Midland.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 217 MVA.
Network Upgrade Justification: To address the overload of Howe Interchange - Midland 69 kV Ckt 1 for the outages: Bonanza - Hackett - Reeves Road 161 kV Ckt 1 and Bonanza Tap 161 kV; Bonanza - Bonanza Tap 161 kV; Bonanza - Hackett AECC 161 kV Ckt 1; or Excelsior - Hackett AECC 161 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $9,145,130
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Upgrades with Modifications

Previous NTC Number: 200167
Previous NTC Issue Date: 4/9/2012
Project ID: 1012
Project Name: Line - Diana - Perdue 138 kV Reconductor
Need Date for Project: 6/1/2013
Estimated Cost for Project: $18,805,489

Network Upgrade ID: 11331
Network Upgrade Name: Diana - Perdue 138 kV Ckt 1 #2
Network Upgrade Description: Rebuild 21.85-mile 138 kV line from Diana to Perdue.

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Replace switches, jumpers, and upgrade CT ratios at Diana and Perdue. Upgrade relay settings at Diana.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Reason for Change: The 2013 ITP Near-Term Assessment determined the Need Date should be advanced from 6/1/2014 to 6/1/2013.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 478 MVA.
Network Upgrade Justification: To address the overload of Diana - Perdue 138 kV Ckt 1 for the outage of the Harrison Road - Liberty City Tap 138 kV Ckt 1 or a portion of the Pirkey - Easton - Knox 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $18,805,489
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 9/18/2012

Previous NTC Number: 200167
Previous NTC Issue Date: 4/9/2012
Project ID: 502
Project Name: Line - Northwest Henderson - Poynter 69 kV
Need Date for Project: 6/1/2013
Estimated Cost for Project: $7,815,833

Network Upgrade ID: 10647
Network Upgrade Name: Northwest Henderson - Poynter 69 kV Ckt 1
Network Upgrade Description: Reconductor 3.25-mile 69 kV line from Northwest Henderson to Poynter with 1272 ACSR.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Reason for Change: The 2013 ITP Near-Term Assessment determined the Need Date should be advanced from 6/1/2014 to 6/1/2013.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Northwest Henderson - Poynter 69 kV Ckt 1 for the outage of Evenside - Northwest Henderson 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,815,833
Cost Allocation of the Network Upgrade: Base Plan

SPP-NTC-200216

Estimated Cost Source: AEP
Date of Estimated Cost: 11/15/2011

Commitment to Construct
Within 90 days of this NTC, please provide to SPP a written commitment to construct the Network Upgrade(s) pursuant to Attachment O, Section VI.6 of the SPP OATT, a construction schedule for the Network Upgrade(s), and the NTC Project Estimate, which is the updated ±20% cost estimate for the Network Upgrade(s) in the Standardized Cost Estimate Reporting Template. Failure to provide a sufficient written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
Please continue to keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit quarterly status updates of the Network Upgrade(s) in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

SPP Southwest Power Pool

HELPING OUR MEMBERS WORK TOGETHER
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE

SPP-NTC-200216

Sincerely,

Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Katherine Prewitt - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Terri Gallup - AEP
Matt Vermillion - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

SPP Southwest Power Pool

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TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE

SPP-NTC-200246

SPP
Notification to Construct

February 19, 2014

Mr. Shawn Robinson
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Robinson,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachment O, Section VI, of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as agent for Public Service Company of Oklahoma and Southwestern Electric Power Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On January 28, 2014, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of the 2014 Integrated Transmission Planning ("ITP") Near-Term Assessment.

New Network Upgrades

Project ID: 30559
Project Name: Line - Chapel Hill REC - Welsh Reserve 138 kV Ckt 1
Need Date for Project: 6/1/2019
Estimated Cost for Project: $6,651,694

Network Upgrade ID: 50697
Network Upgrade Name: Chapel Hill REC - Welsh Reserve 138 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 4.4-mile 138 kV line from Chapel Hill REC to Welsh Reserve.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 592 MVA.

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SPP-NTC-200246

Network Upgrade Justification: To address the overload of Chapel Hill REC - Welsh Reserve 138 kV Ckt 1 for the outage of Lone Star South - Pittsburg 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $6,651,694
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

Project ID: 30573
Project Name: Line - Broadmoor - Fort Humbug 69 kV Ckt 1
Need Date for Project: 6/1/2019
Estimated Cost for Project: $6,695,986

Network Upgrade ID: 50718
Network Upgrade Name: Broadmoor - Fort Humbug 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 1.7-mile 69 kV line from Fort Humbug to Broadmoor with 1233.6 ACSR/TW conductor. Upgrade jumpers at Fort Humbug along with jumpers and bus at Broadmoor.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Broadmoor - Fort Humbug 69 kV Ckt 1for the outage of Forbing Tap - South Shreveport 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $6,695,986
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

Project ID: 30574
Project Name: Line - Daingerfield - Jenkins Rec 69 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2019
Estimated Cost for Project: $2,819,806

Network Upgrade ID: 50719
Network Upgrade Name: Daingerfield - Jenkins REC T 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 1.3-mile 69 kV line from Daingerfield to Jenkins REC T with 959.6 ACSR/TW conductor.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee

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Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 178 MVA.
Network Upgrade Justification: To address the overload of Daingerfield - Jenkins T 69 kV for the outage of Lone Star South - Pittsburg 138 kV Ckt 1, Welsh Reserve - Wilkes 138 kV Ckt 1, or Chapel Hill REC - Welsh Reserve 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $2,819,806
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

Project ID: 30575
Project Name: Line - Hallsville - Longview Heights 69 kV Ckt 1
Need Date for Project: 6/1/2014
Estimated Cost for Project: $8,851,677

Network Upgrade ID: 50720
Network Upgrade Name: Hallsville - Longview Heights 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 6.6-mile 69 kV line from Longview Heights to Hallsville with 1233.6 ACSR/TW conductor. Upgrade jumpers, CT ratios, and relay settings at Longview Heights.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 89 MVA.
Network Upgrade Justification: To address the overload of Hallsville - Longview Heights Ckt 1 69 kV for the outage of Marshall - Marshall Auto 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $8,851,677
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

Project ID: 30576
Project Name: Line - Hallsville - Marshall 69 kV Ckt 1
Need Date for Project: 6/1/2014
Estimated Cost for Project: $15,248,925

Network Upgrade ID: 50721
Network Upgrade Name: Hallsville - Marshall 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 11.2-mile 69 kV line from Hallsville to

SPP-NTC-200246

Marshall with 1233.6 ACSR/TW conductor. Upgrade jumpers, CT ratios, and relay settings at Marshall.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 89 MVA.
Network Upgrade Justification: To address the overload of Hallsville - Marshall 69 kV Ckt 1 for the outages of Pirkey - Whitney 138 kV, Lake Lamond - Spring Hill 138 kV Ckt 1, Easton Rec - Pirkey 138 kV Ckt 1, Easton Rec - Knox Lee 138 kV Ckt 1, Diana-Spring Hill 138 kV Ckt 1, Blocker Tap - Marshall 69 kV Ckt 1, or Lake Lamond 138/69 kV Ckt 1 Transformer.
Estimated Cost for Network Upgrade (current day dollars): $15,248,925
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

Project ID: 30598
Project Name: Line - Letourneau Tertiary #1 - Letourneau Tap 69 kV Ckt 1
Need Date for Project: 6/1/2017
Estimated Cost for Project: $2,358,802

Network Upgrade ID: 50759
Network Upgrade Name: Letorneau - Air Liquide Tap 69 kV Ckt 1
Network Upgrade Description: Build new 0.3-mile 69 kV line from Letourneau to a tap point along the existing Air Liquide Tap line with 664.8 ACSR/TW conductor. Make the existing line section from Letourneau Plant to Letourneau open normally.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 150 MVA.
Network Upgrade Justification: To address the overload of Letorneau - Letourneau Tap 69 kV Ckt 1 under normal conditions (no outages).
Estimated Cost for Network Upgrade (current day dollars): $2,358,802
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/22/2013

SPP-NTC-200246

Upgrades with Modifications

Previous NTC Number: 200216
Previous NTC Issue Date: 2/20/2013
Project ID: 512
Project Name: Line - Ellerbe Road - Forbing Tap 69 kV Ckt 1
Need Date for Project: 6/1/2014
Estimated Cost for Project: $8,174,689

Network Upgrade ID: 10657
Network Upgrade Name: Ellerbe Road - Forbing T 69 kV Ckt 1
Network Upgrade Description: Rebuild 2.0-mile 69 kV line from Ellerbe Road to Forbing T with 1233.6 ACSR/TW conductor.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Reason for Change: The 2014 ITP Near-Term Assessment accelerated the Need Date from 6/1/2018 to 6/1/2014.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 121 MVA.
Network Upgrade Justification: To address the overload of Ellerbe Road - Forbing Road 69 kV Ckt 1 for the outage of Broadmoor - Fort Humbug 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $8,174,689
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 5/20/2013

Withdrawal of Upgrades

Previous NTC Number: 200231
Previous NTC Issue Date: 9/23/2013
Project ID: 30432
Project Name: Line - 52nd & Delaware West Tap - Riverside Station 138 kV

Network Upgrade ID: 50527
Network Upgrade Name: 52nd & Delaware West Tap - Riverside Station 138 kV Ckt 1
Network Upgrade Description: Rebuild 5.4-mile 138 kV line from 52nd & Delaware West Tap to Riverside Station with 2-795 ACSR conductor. Upgrade relay settings at Riverside Station.

SPP-NTC-200246

Reason for Change: Identified in 2014 ITP Near-Term Assessment that upgrade is no longer needed for regional reliability.

Withdrawal of Network Upgrade
AEP has been made aware of all Network Upgrades withdrawn through the expansion plan process. This letter is the formal notification to stop any further work on this Network Upgrade(s) and submit any cost information associated with the Network Upgrade(s) to SPP.

Commitment to Construct
Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, pursuant to Attachment O, Section VI.6 of the SPP OATT, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

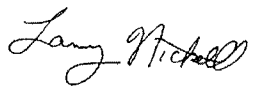
All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions.

SPP-NTC-200246

Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,



Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Katherine Prewitt - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Terri Gallup - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

SPP Southwest Power Pool

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SPP-NTC-200431

SPP
Notification to Construct

February 21, 2017

Mr. Wayman Smith
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved ITP10 Network Upgrades

Dear Mr. Smith,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as agent for Public Service Company of Oklahoma, Southwestern Electric Power Company, and AEP Oklahoma Transmission Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On January 31, 2017, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of the 2017 Integrated Transmission Planning 10-Year ("ITP10") Assessment.

New Network Upgrades

Project ID: 31131
Project Name: Line - Siloam Springs - Siloam Springs City 161 kV Ckt 1 Rebuild
Need Date for Project: 1/1/2017
Estimated Cost for Project: $5,059,400 (this project cost contains Network Upgrades not included in this NTC)

Network Upgrade ID: 51738
Network Upgrade Name: Siloam Springs - Siloam Springs City 161 kV Ckt 1 Rebuild (AEP)
Network Upgrade Description: Rebuild 2.1-mile 161 kV line from Siloam Springs (AEP) - Siloam Springs City (GRDA) and upgrade terminal equipment at Siloam Springs.
Network Upgrade Owner: AEP

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SPP-NTC-200431

MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Economic
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 446 MVA.
Network Upgrade Justification: Identified as needed as an economic project in the 2017 ITP10.
Estimated Cost for Network Upgrade (current day dollars): $4,780,000
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 9/7/2016

Commitment to Construct
Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for any Network Upgrade(s) categorized as Reliability for which the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade categorized as Reliability will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

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SPP-NTC-200431

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Jay Caspary - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Brian Johnson - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

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SPP-NTC-200217

SPP
Notification to Construct with Conditions

February 19, 2013

Mr. Paul Hassink
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Hassink,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachment O, Section VI, of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as the Designated Transmission Owner ("DTO"), to construct the Network Upgrade(s). This NTC is conditioned upon AEP not ordering materials or beginning construction until:

(1) the DTO submits a refined NTC-C Project Estimate ("CPE") to SPP that has a variance bandwidth of -20% to +20% that does not exceed the Study Estimate variance bandwidth of -30% to +30% as provided for in SPP's Business Practices; **or**

(2) the SPP Board of Directors considers SPP's re-evaluation of a project that has a refined CPE from the DTO that exceeds the Study Estimate variance bandwidth of -30% to +30% as provided for in SPP's Business Practices.

On January 29, 2013, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed.

New Network Upgrades

Project ID: 30432
Project Name: Line - 52nd & Delaware West Tap - Riverside Station 138 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $24,992,196

Network Upgrade ID: 50527
Network Upgrade Name: 52nd & Delaware West Tap - Riverside Station 138 kV Ckt 1
Network Upgrade Description: Rebuild 5.4-mile 138 kV line from 52nd & Delaware

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West Tap to Riverside Station with 2-795 ACSR. Upgrade relay settings at Riverside Station.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 331 MVA.
Network Upgrade Justification: To address the overload of 52nd & Delaware West Tap - Riverside Station 138 kV Ckt 1 for the outage of SPP-AEPW-38 (72nd & Elwood - Tulsa Power 138 kV and Tulsa Power Station - Oaks East Tap - Riverside Station 138 kV).
Estimated Cost for Network Upgrade (current day dollars): $24,992,196
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30449
Project Name: Line - Rock Hill - Springridge Pan-Harr REC 138 kV Ckt 1
Need Date for Project: 6/1/2014
Estimated Cost for Project: $25,060,655

Network Upgrade ID: 50545
Network Upgrade Name: Rock Hill - Springridge Pan-Harr REC 138 kV Ckt 1
Network Upgrade Description: Rebuild 27.6-mile 138 kV line from Rock Hill to Springridge Pan-Harr REC with 1926.9 ACSR/TW.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 376 MVA.
Network Upgrade Justification: To address the overload of Rock Hill - Springridge Pan-Harr REC 138 kV Ckt 1 for the outage of SPP-AEPW-30 (SW Shreveport - Western Electric Tap - Stonewall 138 kV and Western Electric Tap - Western Electric 138 kV).
Estimated Cost for Network Upgrade (current day dollars): $25,060,655
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 11/21/2012

Project ID: 30495
Project Name: Sub - Messick 500/230 kV

SPP-NTC-200217

Need Date for Project: 6/1/2013
Estimated Cost for Project: $51,877,771

Network Upgrade ID: 50607
Network Upgrade Name: Messick 500/230 kV Transformer Ckt 1
Network Upgrade Description: Build Messick 500/230 kV station. Connect to Carrol, Clarence, and Western Kraft 230 kV lines. Install 500/230 kV 675 MVA transformer. This upgrade is contingent upon approval from Cleco Power LLC and Entergy Louisiana LLC.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 675 MVA.
Network Upgrade Justification: To address the overload of International Paper - Wallace Lake 138 kV Ckt 1 (AEP/CLECO) and International Paper - Mansfield 138 kV (CLECO) for the outage of Dolet Hills - Southwest Shreveport 345 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $30,369,537
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 1/21/2013

Network Upgrade ID: 50615
Network Upgrade Name: Messick 500 kV Terminal Upgrades
Network Upgrade Description: Install terminal equipment on 500 kV side of new Messick substation. Connect to Mt. Olive - Hartburg 500 kV line. This upgrade is contingent upon approval from Cleco Power LLC and Entergy Louisiana LLC for Upgrade ID 50607.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup, Matt Vermillion
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating 3,000 amps but not limited to that amount
Network Upgrade Justification: To address the overload of International Paper - Wallace Lake 138 kV Ckt 1 (AEP/CLECO) and International Paper - Mansfield 138 kV (CLECO) for the outage of Dolet Hills - Southwest Shreveport 345 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $21,508,234
Cost Allocation of the Network Upgrade: Base Plan

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Estimated Cost Source: AEP
Date of Estimated Cost: 1/21/2013

Commitment to Construct
Within 90 days of this NTC, please provide to SPP a written commitment to construct the Network Upgrade(s) pursuant to Attachment O, Section VI.6 of the SPP OATT and a construction schedule for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

CPE
Please provide SPP a CPE by August 31, 2013, as described in SPP's Business Practice No. 7060 regarding Notification to Construct with Conditions. AEP shall advise SPP of any inability to provide the CPE by August 31, 2013, as soon as the inability becomes apparent.

Removal of Conditions
Upon notice by SPP of removal of the conditions contained in this NTC, SPP will issue the DTO a new NTC and the following will be applicable:

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
Please continue to keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit quarterly status updates of the Network Upgrade(s) in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

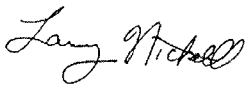
All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to

SPP-NTC-200217

this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,



Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Katherine Prewitt - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Terri Gallup - AEP
Matt Vermillion - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

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SPP-NTC-200314

SPP
Notification to Construct

February 18, 2015

Mr. Shawn Robinson
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Robinson,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP") as agent for Public Service Company of Oklahoma, Southwestern Electric Power Company, and AEP Oklahoma Transmission Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On January 27, 2015, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of the 2015 Integrated Transmission Planning ("ITP") Near-Term Assessment.

New Network Upgrades

Project ID: 30526
Project Name: Line - Hobart - Roosevelt Tap - Snyder 69 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2015
Estimated Cost for Project: $13,963,057

Network Upgrade ID: 50657
Network Upgrade Name: Hobart - Roosevelt Tap 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 10-mile 69 kV line from Hobart to Roosevelt Tap. Upgrade jumpers, switches, CTs, and relay settings at Hobart.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an

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emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Hobart - Roosevelt Tap 69 kV Ckt 1 and Roosevelt Tap - Snyder 69 kV Ckt 1 for the loss of Hobart Junction – Ompa - Altus Tamarack 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $4,744,431
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Network Upgrade ID: 50658
Network Upgrade Name: Roosevelt Tap - Snyder 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 18.7-mile 69 kV line from Roosevelt Tap to Snyder. Upgrade jumpers, switches, CTs, and relay settings at Snyder.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 158 MVA.
Network Upgrade Justification: To address the overload of Hobart - Roosevelt Tap 69 kV Ckt 1 and Roosevelt Tap - Snyder 69 kV Ckt 1 for the loss of Hobart Junction – Ompa - Altus Tamarack 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $9,218,626
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Project ID: 30803
Project Name: Line - Mineola - Grand Saline 69 kV Ckt 1 Rebuild
Need Date for Project: 4/1/2020
Estimated Cost for Project: $7,248,352

Network Upgrade ID: 51089
Network Upgrade Name: Mineola - Grand Saline 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild Grand Saline - Mineola 69 kV line, and upgrade jumpers, switches, CTs, and relay settings at both substations.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an

SPP-NTC-200314

emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Grand Saline - Mineola 69 kV Ckt 1 for the loss of Quitman - Westwood 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,248,352
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Project ID: 30873
Project Name: Line - Southwestern Station - Carnegie 138 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2016
Estimated Cost for Project: $13,404,139

Network Upgrade ID: 51187
Network Upgrade Name: Southwestern Station - Carnegie 138 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 16.5-mile 138 kV line from Southwestern Station to Carnegie.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 376 MVA.
Network Upgrade Justification: To address the overload of Carnegie - Southwestern Station 138 kV Ckt 1 for the loss of Chisholm - Gracemont 345 kV Ckt 1, Chisholm 345/230 kV Ckt 1 transformer, Oney - Washita 138 kV Ckt 1, and Binger Niject - Oney 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $13,404,139
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Project ID: 30889
Project Name: Line - Linwood - South Shreveport 138 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2017
Estimated Cost for Project: $3,409,682

Network Upgrade ID: 51207
Network Upgrade Name: Linwood - South Shreveport 138 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 2.4-mile 138 kV line from Linwood to Cedar Grove to South Shreveport. Upgrade jumpers at Linwood.
Network Upgrade Owner: AEP

SPP-NTC-200314

MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 376 MVA.
Network Upgrade Justification: To address the overload of Cedar Grove - Linwood 138 kV Ckt 1 for the loss of Arsenal Hill - Fort Humbug 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $3,409,682
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Project ID: 30895
Project Name: Line - Brooks Street - Edwards Street 69 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2016
Estimated Cost for Project: $570,052

Network Upgrade ID: 51215
Network Upgrade Name: Brooks Street - Edwards Street 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 0.8-mile 69 kV line from Brooks Street to Edwards Street. Upgrade jumpers at both substations.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Brooks Street - Edwards 69 kV Ckt 1 for the loss of Arsenal Hill - Fort Humbug 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $570,052
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: SPP
Date of Estimated Cost: 12/1/2014

Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

SPP-NTC-200314

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Lanny Nickell

Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Bob Bradish - AEP

SPP-NTC-200314

Paul Johnson - AEP
Richard Ross - AEP
Terri Gallup - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

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SPP-NTC-200339

SPP
Notification to Construct

March 17, 2015

Mr. Shawn Robinson
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Robinson,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP") as agent for Public Service Company of Oklahoma, Southwestern Electric Power Company and AEP Oklahoma Transmission Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On July 29, 2013, SPP concluded that the Network Upgrade(s) below are required on the AEP system to fulfill delivery point request(s) as detailed in the Delivery Point Network Study for delivery point request DPA-2013-March-296.

New Network Upgrades

Project ID: 30762
Project Name: Multi - Ellerbe Road - Lucas 69 kV
Need Date for Project: 3/1/2019
Estimated Cost for Project: $7,282,123

Network Upgrade ID: 51034
Network Upgrade Name: Ellerbe Road - Lucas 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild existing 3.2-mile 69 kV line from Ellerbe Road to Lucas.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an

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SPP-NTC-200339

emergency rating of 119 MVA.
Network Upgrade Justification: To address a potential overload identified in the Delivery Point Network Study for request DPA-2013-March-296.
Estimated Cost for Network Upgrade (current day dollars): $6,629,465
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/6/2015

Network Upgrade ID: 51035
Network Upgrade Name: Ellerbe Road - Lucas 69 kV Terminal Upgrades
Network Upgrade Description: Replace jumpers at 69 kV substations Ellerbe Road and Lucas. Replace relay panel at Ellerbe Road. Change relay setting at Lucas.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Terri Gallup
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements must have at least an emergency rating of 119 MVA.
Network Upgrade Justification: To address a potential overload identified in the Delivery Point Network Study for request DPA-2013-March-296.
Estimated Cost for Network Upgrade (current day dollars): $652,658
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/6/2015

Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan

The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

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SPP-NTC-200339

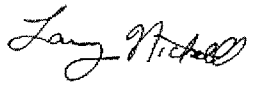
Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,



Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Terri Gallup - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

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SPP-NTC-200361

SPP
Notification to Construct

December 11, 2015

Mr. Shawn Robinson
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Robinson,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP") as agent for Public Service Company of Oklahoma, Southwestern Electric Power Company, and AEP Oklahoma Transmission Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On October 27, 2015, the SPP Board of Directors approved the issuance of a modified NTC for the Network Upgrade(s) listed below, pending the completion of analysis that confirms the solution resolves the need and does not create any other adverse impact.

Upgrades with Modifications

Previous NTC Number: 200246
Previous NTC Issue Date: 2/19/2014
Project ID: 30598
Project Name: Device - Letourneau 69 kV Cap Bank
Need Date for Project: 6/1/2017
Estimated Cost for Project: $1,600,349

Network Upgrade ID: 50759
Network Upgrade Name: Letourneau 69 kV Cap Bank
Network Upgrade Description: Install 16.2-MVAR 69 kV capacitor bank at Letourneau.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson

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SPP-NTC-200361

TWG Representative: Matthew McGee
Reason for Change: SPP determined in the 2016 ITP Near-Term Assessment the scope of the Network Upgrade(s) should be modified to accommodate a better regional solution.
Categorization: Regional reliability
Network Upgrade Specification: Install 16.2 MVAR of capacitance at Letourneau 69 kV substation.
Network Upgrade Justification: To address the overload of Letorneau - Letourneau Tap 69 kV Ckt 1 under normal conditions (no outages).
Estimated Cost for Network Upgrade (current day dollars): $1,600,349
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 12/3/2015

Commitment to Construct
Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings.

SPP-NTC-200361

However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Brian Johnson - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

SPP Southwest Power Pool

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SPP-NTC-200406

SPP
Notification to Construct

August 17, 2016

Mr. Wayman Smith
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Smith,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as agent for Public Service Company of Oklahoma, Southwestern Electric Power Company, and AEP Oklahoma Transmission Company, as the Designated Transmission Owner, to construct the Network Upgrade(s).

On July 26, 2016, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed.

New Network Upgrades

Project ID: 30889
Project Name: Line - Linwood - South Shreveport 138kV Ckt 1 Rebuild
Need Date for Project: 6/1/2017
Estimated Cost for Project: $4,202,042

Network Upgrade ID: 51207
Network Upgrade Name: Linwood - South Shreveport 138 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild the 2.4-mile 138kV line from Linwood to Cedar Grove to South Shreveport. Upgrade the jumpers at Linwood.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an

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emergency rating of 376 MVA.
Network Upgrade Justification: Upgrade identified as needed for regional reliability as a result of further evaluation of the Needs Assessment of the 2016 ITPNT.
Estimated Cost for Network Upgrade (current day dollars): $4,202,042
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 5/12/2016

Project ID: 31009
Project Name: Line - Duncan - Tosco 69 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2018
Estimated Cost for Project: $5,974,766

Network Upgrade ID: 51454
Network Upgrade Name: Duncan - Tosco 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 69 kV line from Duncan to Tosco. Replace wave trap at Duncan.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 45 MVA.
Network Upgrade Justification: Upgrade identified in the Needs Assessment of the 2016 ITPNT as needed for regional reliability.
Estimated Cost for Network Upgrade (current day dollars): $5,974,766
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/16/2016

Project ID: 31039
Project Name: Line - Comanche Tap - Tosco 69 kV Ckt 1 Rebuild
Need Date for Project: 6/1/2020
Estimated Cost for Project: $4,365,864

Network Upgrade ID: 51524
Network Upgrade Name: Comanche Tap - Tosco 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 69 kV line from Comanche Tap to Tosco.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional reliability

SPP-NTC-200406

Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 173 MVA.
Network Upgrade Justification: Upgrade identified in the 2016 ITPNT Needs Assessment as needed for regional reliability.
Estimated Cost for Network Upgrade (current day dollars): $4,365,864
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 3/14/2016

Withdrawal of Upgrades

Previous NTC Number: 200386
Previous NTC Issue Date: 5/17/2016
Project ID: 31049
Project Name: Device - Cedar Grove - Linwood 138 kV Reactor

Network Upgrade ID: 51542
Network Upgrade Name: Cedar Grove - Linwood 138 kV Reactor
Network Upgrade Description: Install new 1% series line reactor on the 138 kV line from Cedar Grove to Linwood.
Reason for Change: SPP determined the Network Upgrade was no longer required in the 2016 ITPNT.

Withdrawal of Network Upgrade

This letter is the formal notification to stop any further work on this Network Upgrade(s), collect any cost associated with the Network Upgrade(s), and provide this information to SPP.

Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan

The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the

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determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Brian Johnson - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

SPP Southwest Power Pool

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SPP-NTC-200446

SPP
Notification to Construct

May 12, 2017

Mr. Wayman Smith
American Electric Power
212 E. 6th St.
Tulsa, OK 74119

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Smith,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing American Electric Power ("AEP"), as the Designated Transmission Owner, to construct the Network Upgrade(s).

On April 25, 2017, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of the 2017 Integrated Transmission Planning Near-Term Assessment ("ITPNT").

New Network Upgrades

Project ID: 31186
Project Name: Device - IPC 138 kV Cap Bank
Need Date for Project: 12/1/2018
Estimated Cost for Project: $1,298,049

Network Upgrade ID: 51831
Network Upgrade Name: IPC 138 kV Cap Bank
Network Upgrade Description: Install 28.8-MVAR capacitor bank at IPC 138 kV
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional Reliability
Network Upgrade Specification: Install 28.8 MVAR of capacitance at IPC 138 kV
Network Upgrade Justification: Upgrade identified in the Needs Assessment of the 2017 ITPNT as needed for regional reliability.
Estimated Cost for Network Upgrade (current day dollars): $1,298,049

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Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/6/2017

Project ID: 41202
Project Name: Line – Tulsa Southeast - E.61st138 kV Rebuild
Need Date for Project: 6/1/2018
Estimated Cost for Project: $6,014,381

Network Upgrade ID: 61858
Network Upgrade Name: Tulsa Southeast - E.61st- 138 kV Rebuild
Network Upgrade Description: Rebuild Tulsa Southeast - E.61st 3.5-mile 138 kV line.
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional Reliability
Network Upgrade Specification: All elements and conductor must have an emergency rating of at least 278 MVA.
Network Upgrade Justification: Upgrade identified in the Needs Assessment of the 2017 ITPNT as needed for regional reliability.
Estimated Cost for Network Upgrade (current day dollars): $6,014,381
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/6/2017

Project ID: 41233
Project Name: Line - Broken Arrow North - Lynn Lane East 138 kV Ckt 1
Need Date for Project: 6/1/2018
Estimated Cost for Project: $5,714,095

Network Upgrade ID: 71945
Network Upgrade Name: Broken Arrow North - Lynn Lane East 138 kV Ckt 1 Reconductor
Network Upgrade Description: Reconductor Broken Arrow - Lynn Lane East 7.2-mile 138 kV line
Network Upgrade Owner: AEP
MOPC Representative(s): Paul Johnson, Richard Ross, Brian Johnson
TWG Representative: Matthew McGee
Categorization: Regional Reliability
Network Upgrade Specification: All elements and conductor must have an emergency rating of at least 484 MVA.

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Network Upgrade Justification: Upgrade identified in the Needs Assessment of the 2017 ITPNT as needed for regional reliability.
Estimated Cost for Network Upgrade (current day dollars): $5,714,095
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: AEP
Date of Estimated Cost: 2/14/2017

Commitment to Construct
Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

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Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on AEP's part to complete the approved Network Upgrade(s). For project tracking, SPP requires AEP to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, AEP shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments regarding these instructions.

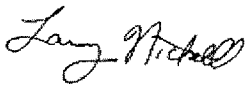
SPP Southwest Power Pool

HELPING OUR MEMBERS WORK TOGETHER
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE

SPP-NTC-200446

Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,



Lanny Nickell
Vice President, Engineering
Phone: (501) 614-3232 • Fax: (501) 482-2022 • lnickell@spp.org

cc: Carl Monroe - SPP
Antoine Lucas - SPP
Jay Caspary - SPP
Bob Bradish - AEP
Paul Johnson - AEP
Richard Ross - AEP
Brian Johnson - AEP
Scott Rainbolt - AEP
Matt McGee - AEP

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AMERICAN ELECTRIC POWER

DGP Load Forecast

Report Rundate Nov 5, 2020 10 33 PM

Forecast Year 2017-2018
Data Both

Forecast Season Summer
Forecast Load >= All

Source Voltage (kv) low value >= high value <=
Nominal Voltage (kv) low value >= high value <=
Limit Cap (in MVA) low value >= high value <=

Limit Factor All

Station All

Operating Unit AEP-Southwestern Electric Power

Operating Company Southwestern Electric Power

State Arkansas

District Fayetteville

Area Rogers

Planner All

Load Forecast - Both-Balance

Projections based on System Normal and No new construction

Operating Unit AEP-Southwestern Electric Power

District Fayetteville

Area Rogers

Name	Source Voltage (kv)	Nominal Voltage (kv)	Max Name Plate	Limit Cap (MVA)	Limit Factor	Power Factor (%)	Unbal. Factor (%)	2017	Forecast Adj. (MVA)	AGR (MVA)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Comments
CENTERTON (#883) 1X	161 00	12 47	20 00	21 00	Winding	-99.97	17.40	7.61	0 00	0 00	8 41	8 41	8 41	8 41	8 41	8 41	8 41	8 41	8.41	8 41	8 41	
13180 (#13180)		12 47		10 37	Ph Pk Up	95 99	20 00	2 18	0 00	0 00	2.98	2 98	2.98	2 98	2.98	2 98	2 98	2 98	2.98	2 98	2 98	
3800 (#3800)		12 47		10 37	Ph Pk Up	-98 97	19 85	5 61	0 00	0 00	5 61	5 61	5 61	5 61	5 61	5.61	5 61	5 61	5.61	5 61	5 61	
DIXIELAND (#961) 1SX	69 00	12 47	33 00	37 30	Winding	-91 18	8 52	11 60	0 00	0 00	12 10	12 10	12 10	12 10	12.10	12 10	12 10	12 10	12 10	12 10	12 10	
1580 (#1580)		12 47		21 60	Ph Pk Up	-99 98	14 41	9 85	0 00	0 00	9 85	9 85	9 85	9 85	9 85	9 85	9 85	9 85	9 85	9 85	9 85	
9370 (#9370)		12 47		21 60	Ph Pk Up	-5 96	0 96	3 88	0 00	0 00	4 38	4 38	4.38	4 38	4.38	4 38	4 38	4 38	4 38	4 38	4 38	
DIXIELAND (#961) 2NX	69 00	12 47	20 00	20 00	Winding	99 91	5 26	15 95	0 00	0 00	15 95	16 45	16.45	16 45	16 45	16 45	16 45	16 45	16 45	16 45	16.45	
12740 (#12740)		12 47		20 74	Ph Pk Up	99 89	4 98	16 21	0 00	0 00	16 21	16 71	16 71	16.71	16.71	16 71	16 71	16 71	16 71	16 71	16 71	
12750 (#12750)		12 47		20 74	Ph Pk Up	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	
LOWELL (#924) 1NX	161 00	12 47	25 00	26 25	Winding	-99 06	2 73	14 22	0 00	0 00	14 42	14 62	14 62	14 62	14 62	14 62	14 62	14 62	14 62	14 62	14 62	
3950 (#3950)		12 47		12 42	OH Exit	-97.96	17 68	6 84	0 00	0 00	7 04	7 24	7 24	7 24	7 24	7.24	7.24	7 24	7.24	7 24	7 24	
3960 (#3960)		12 47		12 96	Ph Pk Up	-99 64	9 55	7 63	0 00	0 00	7.63	7 63	7 63	7 63	7 63	7 63	7 63	7 63	7.63	7 63	7 63	
LOWELL (#924) 2SX	161 00	12 47	25 00	26 25	Winding	99 25	3 95	23 97	1 00	0 00	27.27	30.97	32.27	32.27	32.27	32.27	32.27	32.27	32.27	32.27	32.27	
12800 (#12800)		12 47		12 96	Ph Pk Up	-100 00	3 68	9 35	1 00	0 00	10 65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	
12810 (#12810)		12 47		15 23	OH Exit	99 36	7.31	11 11	0 00	0 00	13 11	14 81	16.11	16.11	16.11	16.11	16.11	16.11	16.11	16.11	16.11	
14120 (#14120)		12 47		24 45	OH Exit	90 34	8 23	5 42	0 00	0 00	5 42	5 42	5 42	5 42	5 42	5 42	5 42	5 42	5.42	5 42	5 42	

Addendum 1 to Attachment AQ

Request for Change in Local Delivery Facilities

Pursuant to the Delivery Point Addition Process in Attachment AQ of the Tariff notice is hereby provided on 08/31/2016 to AEP (the Host Transmission Owner) and Transmission Provider that Transmission Customer requests certain changes in delivery point(s) under the agreement.

Responses marked with an asterisk (*) are required. Supply all details that are known or projected.

Requested Modification

1) Description of delivery point modification*

   a) Type of change requested (new delivery point, upgrade of an existing delivery point, retirement or abandonment of an existing delivery point, etc.) * New point of delivery to a station currently named "Brush Creek Substation" located in Washington County, Elm Springs, Arkansas adjacent to the 161 kV Line from Tonitown to Dyess Substations.

   b) Proposed in service date of the modification* 12/01/2018 ISD

   c) Reason for the requested change (i.e. normal or unexpected load growth or load reduction, reliability needs or other reason) * Load Growth

   d) Related transmission service agreement* Served from AEP Transmission System

   e) Location of the delivery point change and identification of the facilities involved*

      i) Geographic location of the new delivery point or the delivery point to be modified*

      Brush Creek Substation, Elm Springs, Arkansas, West of Highway 112, at approximately N36d 12' 57.27", W 94d. 14' 06.96".

ii) The transmission facilities of the Host Transmission Owner involved in the change*

The existing 161 kV transmission line from Tonitown to Dyess Substations. The site is located beneath the new 161 kV line number 283 between structures 41 and 45 along Highway 112.

iii) Voltage of the facilities involved* 161kV Transmission – 12.47kV Distribution

iv) Desired meter location* N/A

v) Expected impact on other delivery points, if any*

(1) Load transfer from another delivery point and, if so, estimated amount* Lowell Substation, 10 MW

(2) Anticipated modifications to other delivery points due to this change, if any* None

vi) Facilities of others that may be involved* None

2) Facilities to be constructed

a) Facilities to be constructed or provided by the Host Transmission Owner Line Tap

b) Facilities to be constructed or provided by the Transmission Customer

Construct a new 161-12 47 kV substation consisting of one 161/13 09kV 15/20/25 MVA non-LTC transformer Install three (3) 7 62 kV, 667 KVA station voltage regulators, a 169 kV circuit switcher, standard RTU and metering, and two (2) 15 kV feeder breakers Station will be in/out construction on the high side with 2-3000 amp switches and a 3000 amp tie Construct for mobile

3) Technical Aspects of a new delivery point N/A

a) Location – See details included.

i) Located near structure number 161 kV Structures 238 and 241

ii) 911 address

iii) State, County and ¼ of ¼ Section number Washington County, Arkansas

iv) GPS Coordinates approximately N36d 12' 57.27", W 94d, 14' 06.96".

b) Technical aspects

i) Anticipated service voltage 12.47 kV

ii) Number of wires (3 or 4 wire connection) 4 wire

iii) Service voltage

iv) Meter

(1) Type

(2) Voltage

(3) Supplied by

(4) Owned by

(5) PTs and CTs required

(6) Communications configuration

v) Anticipated starting load

vi) Transformer size and voltages

vii) Transmission line conductor size and impedance rating

viii) Type and location of protective devices

4) Other pertinent information

Attachments:

1) Ten year load forecast for the delivery point being added or modified and any associated changes in the load forecast for other delivery points.

AEP Confidential.

Name	Sou.. Volt (kV)	Nomi Volta (kV)	Max Nm Plate Rt (MVA)	Limit Cap (MVA)	Limit Factor	Power Factor (%)	Unbal Factor (%)	% Util	2015 (MVA)	Forcst Adj. (MVA)	AGR (MVA)	2016 (MVA)	2017 (MVA)	2018 (MVA)	2019 (MVA)	2020 (MVA)	2021 (MVA)	2022 (MVA)	2023 (MVA)	2024 (MVA)	2025 (MVA)	2026 (MVA)
LOWELL (#924) 1NX	161	12 47	25 00	26 25	Winding	-99 13	5 33	54 67	14 35	0 00	0 00	14 55	15 25	15 25	15 25	15 25	15 25	15 25	15 25	15 25	15 25	15 25
3950 (#3950)		12 47		12 42	OH Exit	-98 43	15 56	56 34	7 00	0 00	0 00	7 20	7 40	7 40	7 40	7 40	7 40	7 40	7 40	7 40	7 40	7 40
3960 (#3960)		12 47		12 95	Ph Pk Up	-99 62	6 12	59 20	7 67	0 00	0 00	7 67	8 17	8 17	8 17	8 17	8 17	8 17	8 17	8 17	8 17	8 17
Circuit Total				25 38				57 80	14 67	0 00	0 00	14 87	15 57	15 57	15 57	15 57	15 57	15 57	15 57	15 57	15 57	15 57
*LOWELL (#924) 2SX	161	12 47	25 00	26 25	Winding	98 98	1 21	87 87	23 07	0 00	0 15	23 72	24 17	24 02	28 17	28 32	28 47	28 62	28 77	28 92	29 07	29 22
*12800 (#12800)		12 47		12 95	Ph Pk Up	99 99	1 47	71 01	9 20	0 00	0 00	9 50	9 80	9 80	9 80	9 80	9 80	9 80	9 80	9 80	9 80	9 80
*12810 (#12810)		12 47		12 95	Ph Pk Up	98 08	9 68	77 75	10 08	0 00	0 15	10 23	14 08	14 23	14 38	14 53	14 68	14 83	14 98	15 13	15 28	15 43
*4*20 (#14120)		12 47		24 45	OH Exit	94 62	9 54	22 02	5 38	0 00	0 00	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58
Circuit Total				50 37				48 96	24 66	0 00	0 15	25 31	29 46	29 61	29 76	29 91	30 06	30 21	30 36	30 51	30 66	30 81

2) One-line diagram showing existing and proposed facilities pertaining to the request.

Under development

Requestor Contact:

Name: Michael T. Campbell

Title: Principal Engineering Project Manager

Mailing Address: 101 West Township Avenue, Fayetteville, AR 72703

Email Address: mtcampbell@aep.com

Voice Phone No.: 479.973.2346

By: Michael T. Campbell
(Representative of Transmission Customer)

Title: Principle Engineering Project Manager

Date: 08/31/2016

Brush Creek Substation

f. For any facilities that transform voltage between transmission and distribution voltages, which were not endorsed by SPP, provide the following:

1. The relevant portions of system planning studies that support the need for the project.

This project was developed and executed because of the expectation of exceeding the rating on the transformer and distribution circuit at Lowell Substation. The existing transformer was projected to be loaded to 106% of its capacity by the time this new station was placed in service. When the load on a substation element is projected to exceed its normal calculated capability, a project should be planned such that it will relieve loading or increase capacity at the substation prior to the projected overload. Projects need to be submitted for prioritization and budgeting early enough to allow design and construction to be completed by the needed service date.

2. The load growth rate in the area planned to be served by the project during each of the five calendar years immediately before the project was energized.

The annual load growth rate in the area planned to be served by the project was 0.753 megawatts before the project was energized.

3. The load growth rate in the area served by the project during each calendar year starting with the year that the project was initially energized.

The annual load growth rate in the area since the project was energized has been 0.57 megawatts.

4. Peak load projected to be served by the project as forecasted by the applicant and consistent with the planning study for the project provided in Schedule V1-M-1.

The peak load projected to be served by the project as forecasted was 10 megawatts.

5. Peak load served by the project during each year since the project was initially energized.

The peak load served by the project during each year since the project was energized has been 7 megawatts.

g. For any facilities that transforms voltage between transmission and distribution voltages, which were not endorsed by SPP please state if the service area is dually certificated with another utility, and explain how you determined which portion of expected load growth that you will serve as opposed to your sister utility?

The area that Brush Creek Substation serves is not dually certified with another utility. Any future load that develops in the area will be serve from this substation.

AMERICAN ELECTRIC POWER

DGP Load Forecast

Report Rundate Nov 5, 2020 9:48 PM

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Forecast Year Data | Forecast Season Forecast Load >= | Source Voltage (kv) low value >= high value <= | Nominal Voltage (kv) low value >= high value <= | Limit Cap (in MVA) low value >= high value <= | Limit Factor | Station

Operating Unit | Operating Company | State | District | Area | Planner

Load Forecast - Both-Balance

Projections based on System Normal and No new construction.

Operating Unit: AEP-Southwestern Electric Power

District: Longview

Area: Mineola

Name	Source Voltage (kv)	Nominal Voltage (kv)	Max Name Plate	Limit Cap (MVA)	Limit Factor	Power Factor (%)	Unbal Factor (%)	2015	Forecast Adj. (MVA)	AGR (MVA)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Comments
ALBA (#983) 1X	69.00	12.47	5.25	5.51	Winding	95.37	10.50	3.33	0.00	0.06	3.39	3.45	3.51	3.57	3.63	3.69	3.75	3.81	3.87	3.93	3.99	
12400 (#12400)		12.47		4.32	Ph Pk Up	95.37	10.50	3.33	0.00	0.06	3.39	3.45	3.51	3.57	3.63	3.69	3.75	3.81	3.87	3.93	3.99	
GRAND SALINE (#988) 1SX 2NX	69.00	12.47	18.75	19.69	Winding	-98.29	3.29	16.69	0.00	0.20	19.39	19.59	19.79	19.99	20.19	20.39	20.59	20.79	20.99	21.19	21.39	
7110 (#7110)		12.47		12.96	Breaker	0.00	0.00	7.70	0.00	0.20	10.40	10.60	10.80	11.00	11.20	11.40	11.60	11.80	12.00	12.20	12.40	
7120 (#7120)		12.47		12.96	Breaker	99.99	5.62	8.92	0.00	0.00	8.92	8.92	8.92	8.92	8.92	8.92	8.92	8.92	8.92	8.92	8.92	
GRAND SALINE (#988) 1SX	69.00	12.47	9.38	9.84	Winding	0.00	0.00	8.35	0.00	0.10	9.70	9.80	9.90	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	
GRAND SALINE (#988) 2NX	69.00	12.47	9.38	9.84	Winding	0.00	0.00	8.35	0.00	0.10	9.70	9.80	9.90	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	
MINEOLA (#978) 1X	69.00	12.47	20.00	42.00	Winding	99.94	4.81	20.48	0.00	0.00	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	
10990 (#10990)		12.47		12.96	Ph Pk Up	-98.99	0.88	5.65	0.00	0.00	5.65	5.65	5.65	5.65	5.65	5.65	5.65	5.65	5.65	5.65	5.65	
3680 (#3680)		12.47		10.37	Ph Pk Up	99.24	15.00	5.21	0.00	0.00	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	
7130 (#7130)		12.47		10.37	Ph Pk Up	-98.22	2.39	4.84	0.00	0.00	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	
9360 (#9360)		12.47		10.37	Ph Pk Up	99.70	17.12	2.57	0.00	0.00	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	2.57	
MINEOLA (#978) 1X	69.00	12.47	20.00	42.00	Winding	0.00	0.00	20.48	0.00	0.00	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	20.48	
MINEOLA (#978) 2X	69.00	12.47	0.00	0.00	Winding																	
NORTH MINEOLA (#93) 1X	69.00	12.47	9.38	8.38	Bus Reg	-62.60	11.45	3.58	0.00	0.00	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	
5380 (#5380)		12.47		12.96	Ph Pk Up	-70.67	0.00	3.61	0.00	0.00	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	
WESTWOOD (#994) 1X 2X	69.00	12.47	13.25	6.25	Bus Reg	-5.98	0.30	3.18	0.00	0.00	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	

Addendum 1 to Attachment AQ

Request for Change in Local Delivery Facilities

Pursuant to the Delivery Point Addition Process in Attachment AQ of the Tariff notice is hereby provided on 2/27/2016 to AEP (the Host Transmission Owner) and Transmission Provider that Transmission Customer requests certain changes in delivery point(s) under the agreement.

Responses marked with an asterisk (*) are required. Supply all details that are known or projected.

Requested Modification

1) Description of delivery point modification*

   a) Type of change requested (new delivery point, upgrade of an existing delivery point, retirement or abandonment of an existing delivery point, etc.) * New point of delivery to a station currently named "Morton Substation" located in Van Zandt County, Grand Saline, Texas adjacent to the 138kV line from North Mineola to Canton Tap.

   b) Proposed in service date of the modification* 10/1/2018

   c) Reason for the requested change (i.e. normal or unexpected load growth or load reduction, reliability needs or other reason) * Load Growth

   d) Related transmission service agreement* Served from AEP Transmission System

   e) Location of the delivery point change and identification of the facilities involved*

      i) Geographic location of the new delivery point or the delivery point to be modified*

      Morten Substation, Grand Saline, Texas, located East of Texas Highway 110, at approximately LAT=32.6549 LONG=-95.7043